



RF MEASUREMENT REPORT

FCC ID: 2ATH6-AVG20WF5
Applicant: AltumView Systems Inc.
Product: AltumView Sentinare 2 Smart Activity Sensor
Model No.: AVG2-0WF5
Brand Name: AltumView
FCC Classification: Unlicensed National Information Infrastructure (NII)
FCC Rule Part(s): Part 15 Subpart E (Section 15.407)
Test Date: March 03 ~ April 11, 2022
Test Result: Complies

Reviewed By:

Sunny Sun

Approved By:

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2202RSU032-U4	Rev. 01	Initial Report	05-07-2022	Valid

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1.4. Product Information

Product Name	AltumView Sentinare 2 Smart Activity Sensor
Model No.	AVG2-0WF5
Brand Name	AltumView
Serial No.	20220217Sample#05, 20220408Sample#02
Wi-Fi Specification	802.11a/b/g/n
Bluetooth Version	V5.0 single mode, BR/EDR
Antenna Information	Refer to section 1.5
Remark:	
1. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification

Frequency Range	For 802.11a/n-HT20: 5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5700MHz, 5745 ~ 5825MHz
Type of Modulation	802.11a/n: OFDM
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 135Mbps
Antenna Specification	PCB Antenna, 5150 ~ 5250: 2.17dBi; 5250 ~ 5350: 2.27dBi 5470 ~ 5725: 2.54dBi; 5745 ~ 5850: 2.28dBi

Note: For other features of this EUT, test report will be issued separately.

1.6. Working Frequencies

802.11a/n-HT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz
48	5240 MHz	52	5260 MHz	56	5280 MHz
60	5300 MHz	64	5320 MHz	100	5500 MHz
104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz
128	5640 MHz	132	5660 MHz	136	5680 MHz
140	5700 MHz	149	5745 MHz	153	5765 MHz
157	5785 MHz	161	5805 MHz	165	5825 MHz

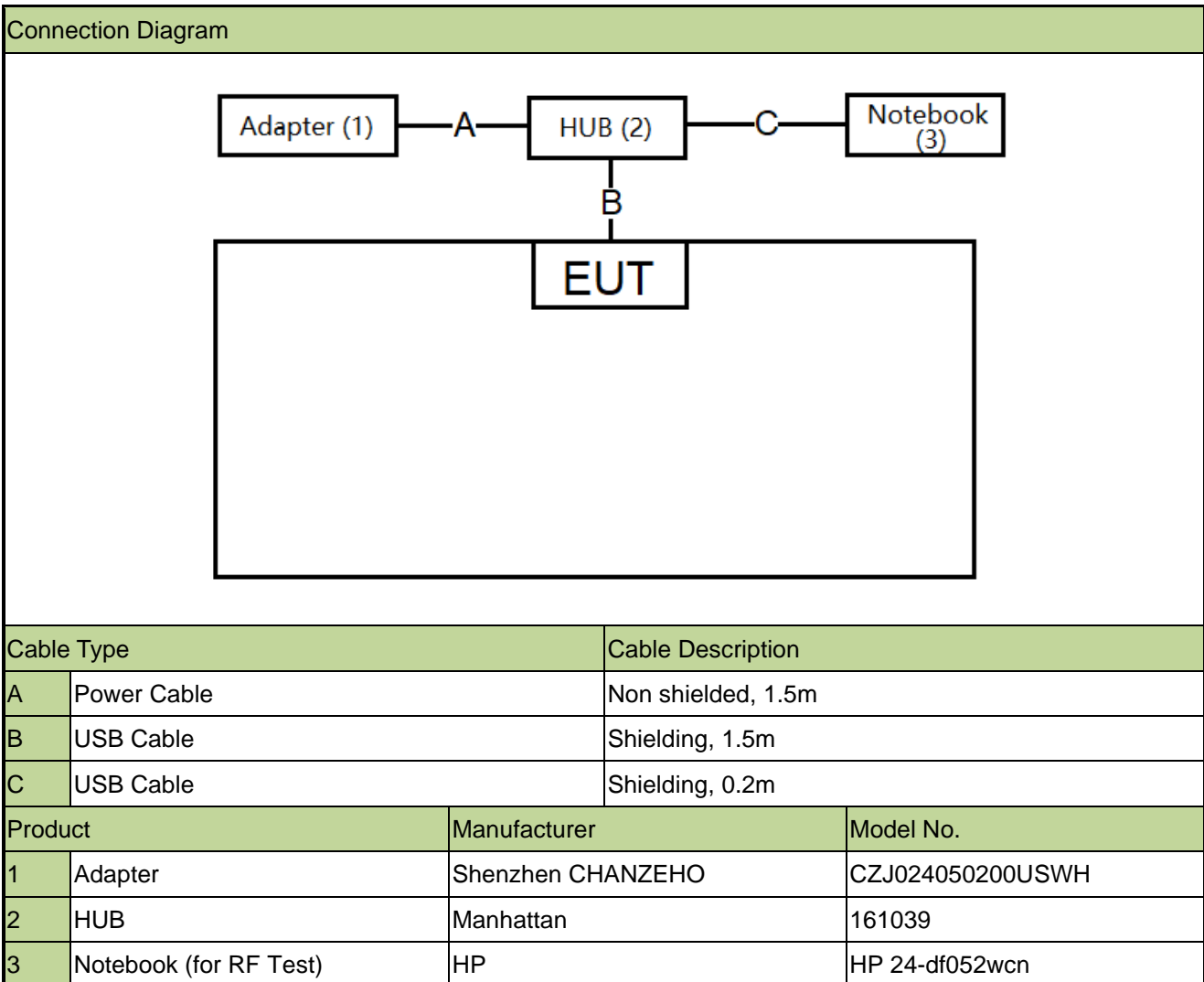
2. Test Configuration

2.1. Test Mode

Mode 1: Transmit by 802.11a (6Mbps)
Mode 2: Transmit by 802.11n-HT20 (MCS0)

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing.



2.3. Test Software

The test utility software used during testing was "ADB".

2.4. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15.407
- KDB 789033 D02v02r01
- ANSI C63.10-2013

2.5. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

- The antenna of the device is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2022/9/12	SIP-AC3
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06598	1 year	2022/11/9	SIP-AC3
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2022/12/23	SIP-AC3
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2022/3/13	SIP-AC3
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2023/3/14	SIP-AC3
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06646	1 year	2022/8/26	SIP-AC3
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2023/1/13	SIP-AC3
Preamplifier	EMCI	EMC001330	MRTSUE06643	1 year	2023/1/13	SIP-AC3
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2022/6/24	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06619	1 year	2022/11/2	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06622	1 year	2022/11/28	SIP-AC3
Signal Analyzer	Keysight	N9020B	MRTSUE06604	1 year	2022/9/7	SIP-AC3
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06599	1 year	2022/10/20	SIP-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06648	1 year	2022/11/9	SIP-AC2
Anechoic Chamber	RIKEN	SIP-AC2	MRTSUE06781	1 year	2022/12/23	SIP-AC2
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2023/3/14	SIP-AC2
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06647	1 year	2022/8/5	SIP-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE06602	1 year	2022/10/11	SIP-AC2
Preamplifier	EMCI	EMC051845SE	MRTSUE06644	1 year	2022/11/8	SIP-AC2
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2022/6/24	SIP-AC2
Thermohygrometer	testo	608-H1	MRTSUE06623	1 year	2022/11/28	SIP-AC2
Thermohygrometer	testo	608-H1	MRTSUE06624	1 year	2022/11/28	SIP-AC2
Signal Analyzer	Keysight	N9010B	MRTSUE06603	1 year	2022/10/31	SIP-AC2
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2022/6/8	SIP-SR2
ISN	R&S	ENY81	MRTSUE06608	1 year	2022/6/7	SIP-SR2
ISN	R&S	ENY81-CA6	MRTSUE06609	1 year	2022/6/7	SIP-SR2
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2022/6/24	SIP-SR2
Four-Line V-Network	R&S	ENV432	MRTSUE06614	1 year	2022/10/10	SIP-SR2
CDNE	Schwarzbeck	CDNE M2	MRTSUE06934	1 year	2023/2/27	SIP-SR2
CDNE	Schwarzbeck	CDNE M3	MRTSUE06935	1 year	2023/2/27	SIP-SR2
50 Ω to 150 Ω Adapter	Schwarzbeck	SR100-6W	MRTSUE06936	1 year	2023/2/27	SIP-SR2
Shielding Room	MIX-BEP	SIP-SR2	MRTSUE06949	/	/	SIP-SR2
USB Power Sensor	Keysight	U8489A	MRTSUE06448	/	/	SIP-TR2
Thermohygrometer	testo	622	MRTSUE06628	1 year	2023/1/6	SIP-TR2
Temperature Chamber	BAOYT	BYG-408CS	MRTSUE06847	1 year	2023/2/22	SIP-TR1

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software

5. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

AC Conducted Emission Measurement
Measurement Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 9kHz~150kHz: 3.74dB 150kHz~30MHz: 3.44dB
Radiated Emission Measurement
Measurement Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): Horizontal: 30MHz~300MHz: 5.04dB 300MHz~1GHz: 4.95dB 1GHz~40GHz: 6.40dB Vertical: 30MHz~300MHz: 5.24dB 300MHz~1GHz: 6.03dB 1GHz~40GHz: 6.40dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.13dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.15dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 0.28%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.407(a)	26dB Bandwidth	Conducted	Pass
15.407(e)	6dB Bandwidth		Pass
15.407(a)(1)(iv), (2), (3)(i)	Maximum Conducted Output Power		Pass
15.407(h)(1)	Transmit Power Control		Pass
15.407(a)(1)(iv), (2), (3)(i), (12)	Peak Power Spectral Density		Pass
15.407(g)	Frequency Stability		Pass
15.407(b)(1), (2), (3), (4)(i)	Undesirable Emissions		Pass
15.205, 15.209 15.407(b)(9), (10), (11)	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Radiated	Pass
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	Pass

Remark:

- The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.

6.2. 26dB & 99% Bandwidth Measurement

6.2.1. Test Limit

N/A

6.2.2. Test Procedure

KDB 789033 D02v02r01- Section II)C)1) (26dB Bandwidth)

KDB 789033 D02v02r01- Section II)D) (99% Bandwidth)

6.2.3. Test Setting

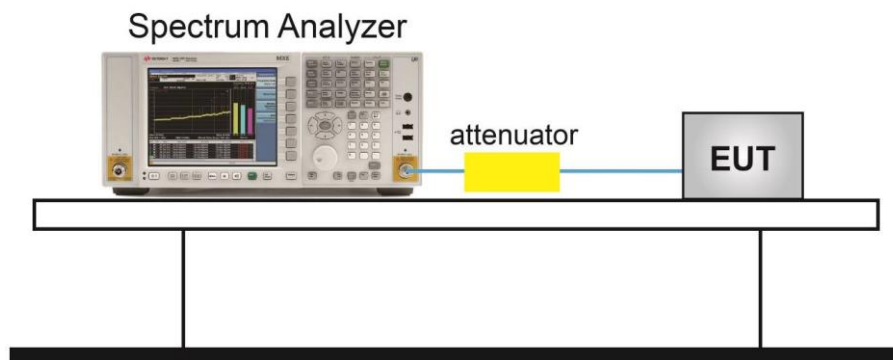
26dB Bandwidth

1. The analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth
2. RBW = approximately 1% of the emission bandwidth.
3. VBW > RBW
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission.
Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

99% Bandwidth

1. Set center frequency to the nominal EUT channel center frequency.
2. RBW = 1% to 5% of the OBW
3. VBW $\geq 3 \times$ RBW
4. Span = 1.5 times to 5 times the OBW
5. Detector = peak
6. Trace mode = max hold
7. Allow the trace to stabilize
8. Use the 99% power bandwidth function of the instrument.

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.2.

6.3. 6dB Bandwidth Measurement

6.3.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

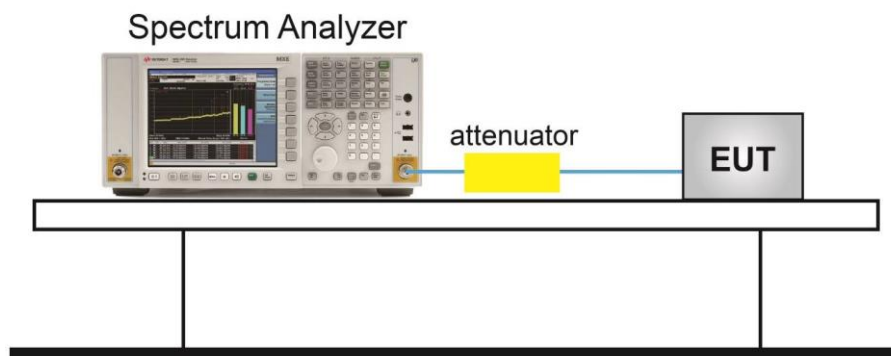
6.3.2. Test Procedure

KDB 789033 D02v02r01- Section II)C)2)

6.3.3. Test Setting

1. Set center frequency to the nominal EUT channel center frequency.
2. RBW = 100 kHz.
3. VBW $3 \times$ RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Output Power Measurement

6.4.1. Test Limit

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm).

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

6.4.2. Test Procedure

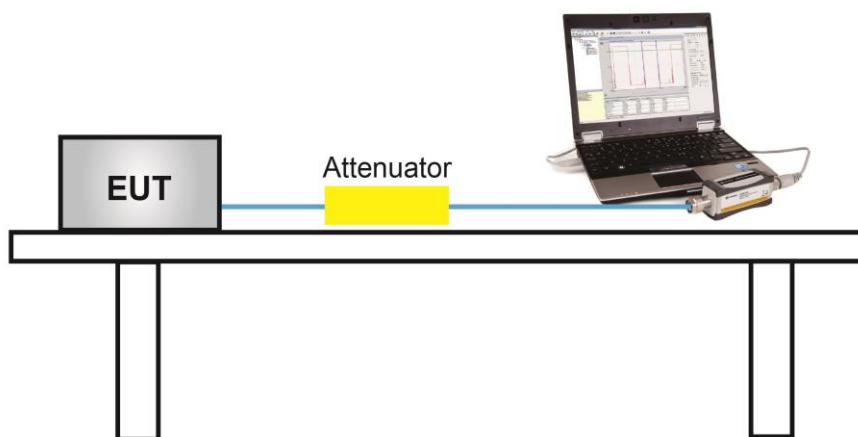
KDB 789033D02v02r01- Section II)E)3)b) Method PM-G

6.4.3. Test Setting

Average Power Measurement

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

6.5. Transmit Power Control Measurement

6.5.1. Test Limit

The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm.

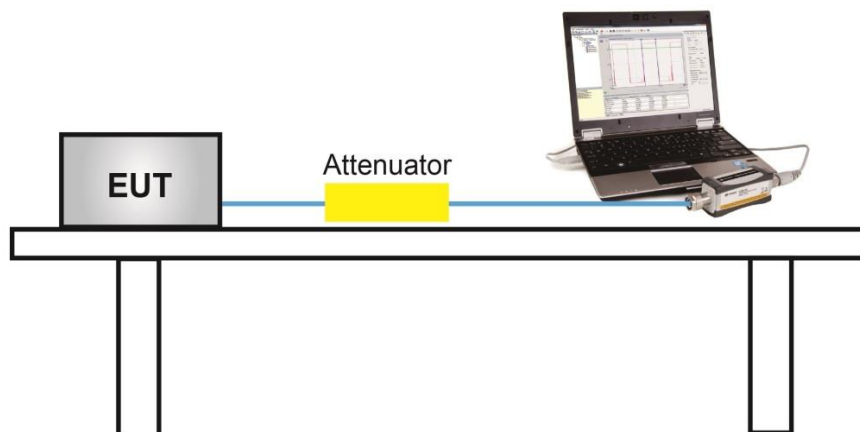
6.5.2. Test Procedure

KDB 789033 D02v01- Section II(E)3)b) Method PM-G

6.5.3. Test Setting

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter. The trace was averaged over 100 traces to obtain the final measured average power.

6.5.4. Test Setup



6.5.5. Test Result

Device supports TPC mechanism, details refer to the operational description.

6.6. Power Spectral Density Measurement

6.6.1. Test Limit

For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

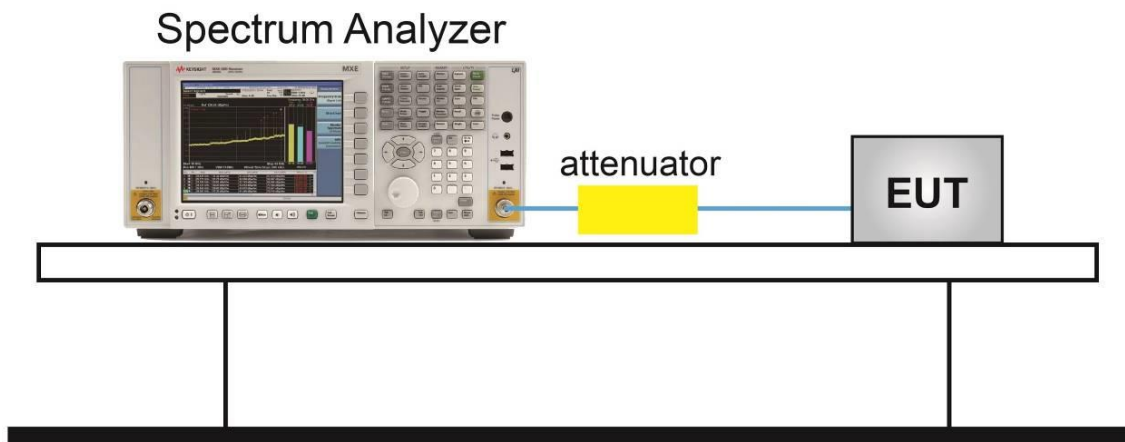
6.6.2. Test Procedure

KDB 789033 D02v02r01-Section II)F)

6.6.3. Test Setting

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire 26dB EBW of the signal
3. RBW = 1MHz (510kHz, if measurement bandwidth of Maximum PSD is specified in 500 kHz), VBW = 3MHz
4. Number of sweep points $\geq 2 \times (\text{span} / \text{RBW})$
5. Detector = power averaging (Average)
6. Sweep time = auto
7. Trigger = free run
8. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.
9. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
10. Add $10 \cdot \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add $10 \cdot \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.

6.6.4. Test Setup



6.6.5. Test Result

Refer to Appendix A.5.

6.7. Frequency Stability Measurement

6.7.1. Test Limit

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

6.7.2. Test Procedure

Frequency Stability Under Temperature Variations:

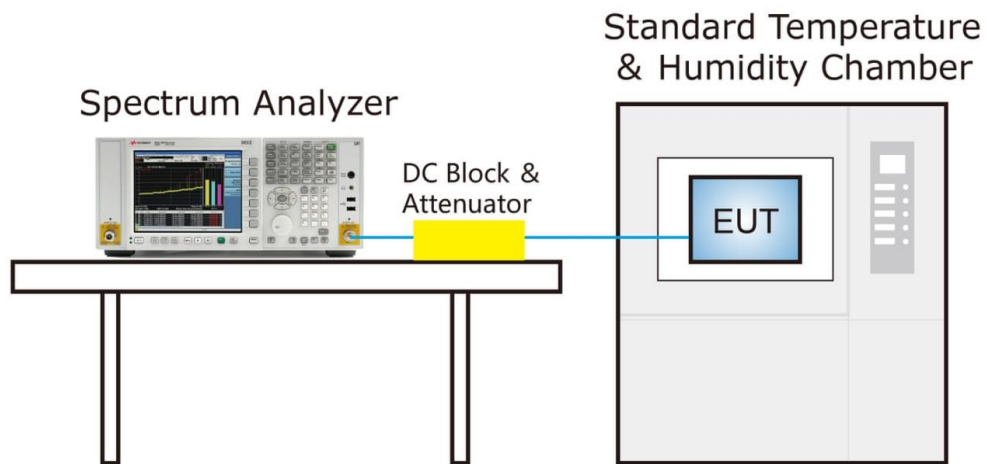
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

6.7.3. Test Setup



6.7.4. Test Result

Refer to Appendix A.5.

6.8. Radiated Spurious Emission Measurement

6.8.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.8.2. Test Procedure

KDB 789033 D02v02r01- Section II)G)

6.8.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000MHz	1MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

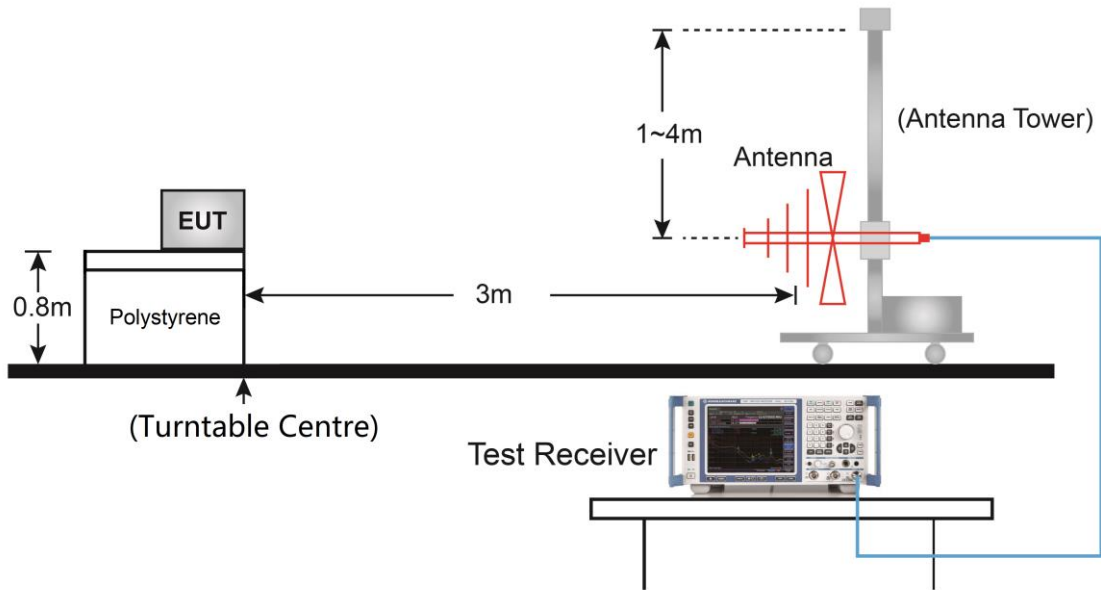
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

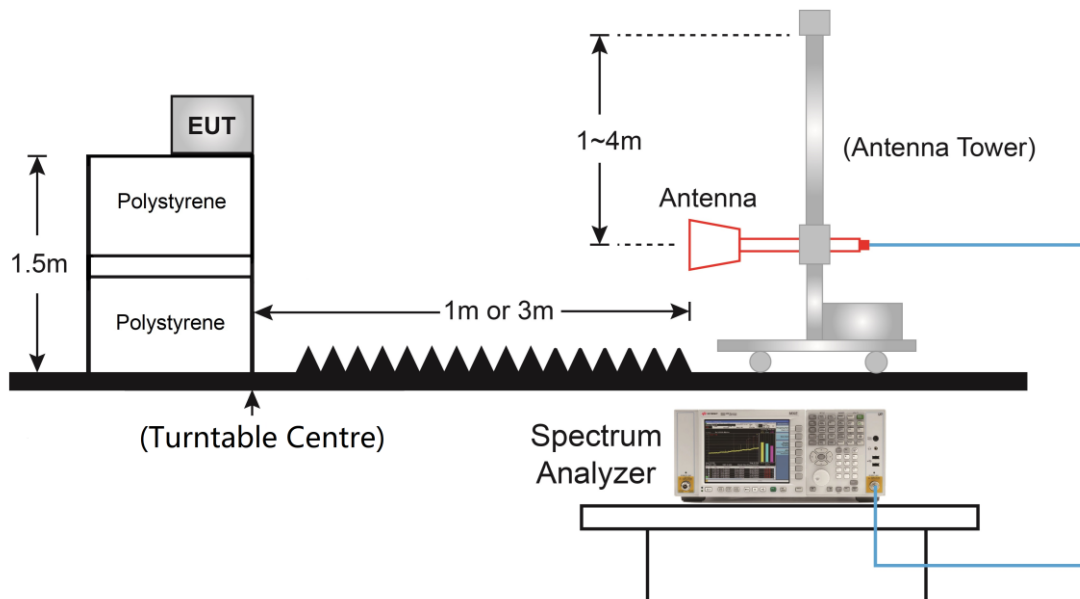
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

6.8.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.8.5. Test Result

Refer to Appendix A.6.

6.9. Radiated Restricted Band Edge Measurement

6.9.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41	--	--	--

For 15.407(b) requirement:

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level

of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Refer to KDB 789033 D02v02r01 G)2)c), as specified in § 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a maximum emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in § 15.407(b)(4)). However, an out-of-band emission that complies with both the peak and average limits of § 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.9.2. Test Procedure

KDB 789033 D02v02r01- Section II)G)

6.9.3. Test Setting

Peak Measurements above 1GHz

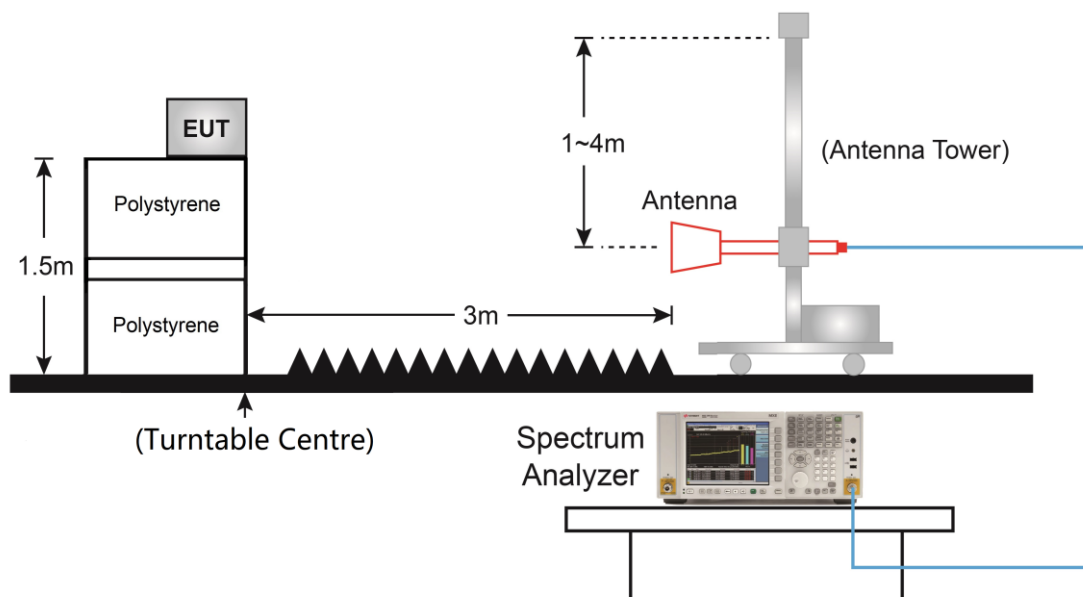
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max hold

7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; if the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10Hz
4. If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration
5. Detector = Peak
6. Sweep time = Auto
7. Trace mode = Max hold
8. Trace was allowed to stabilize

6.9.4. Test Setup



6.9.5. Test Result

Refer to Appendix A.7.

6.10. AC Conducted Emissions Measurement

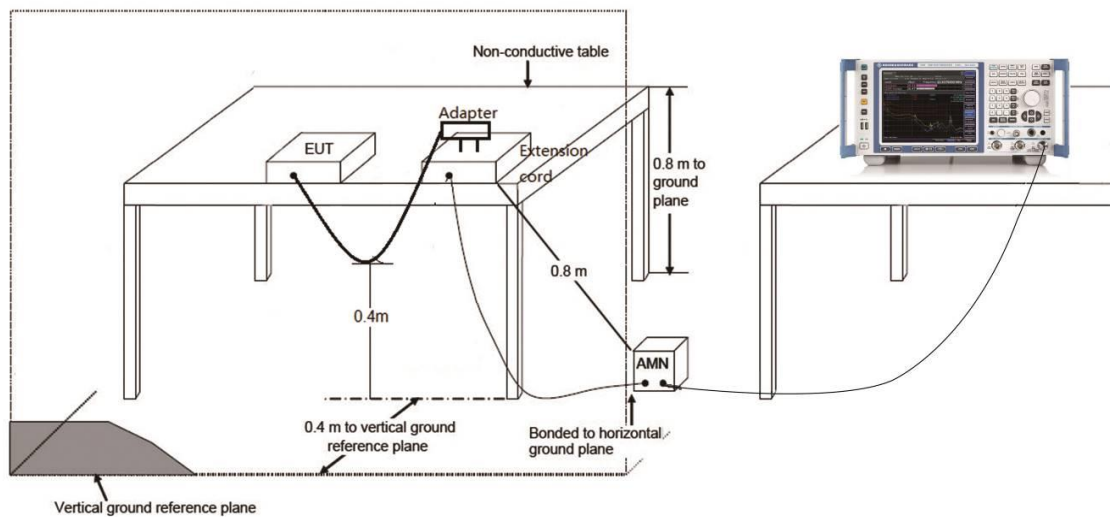
6.10.1. Test Limit

FCC Part 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

6.10.2. Test Setup



6.10.3. Test Result

Refer to Appendix A.8.

Appendix A – Test Result

A.1 Duty Cycle Test Result

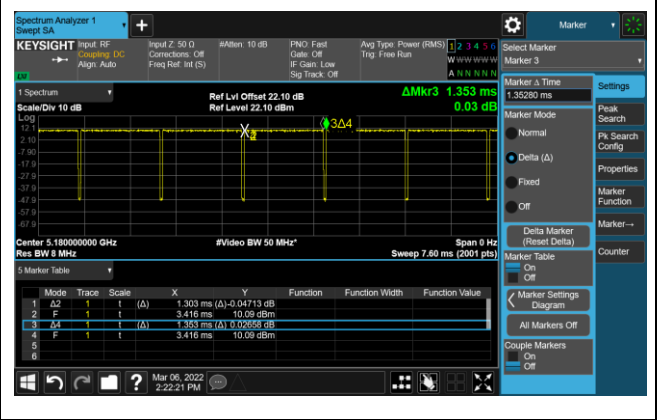
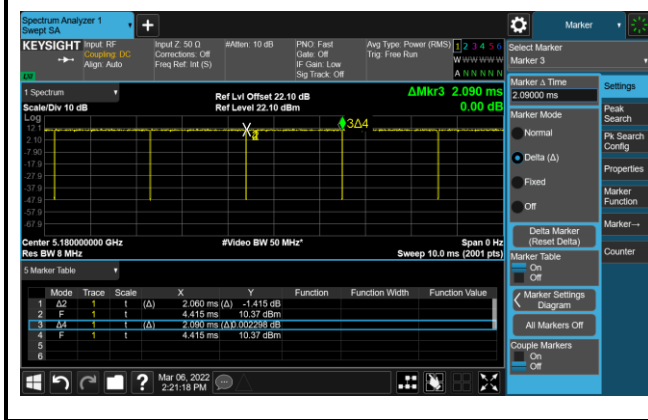
Test Site	SIP-TR2	Test Engineer	Alisa Deng
Test Date	2022/03/06		

Test Mode	Duty Cycle	Test Mode	Duty Cycle
802.11a	98.56%	802.11n-HT20	96.30%

Duty Cycle (T = Transmission Duration)

802.11a (T = 2.060ms)

802.11n-HT20 (T = 1.303ms)



A.2 26dB & 99% Bandwidth Test Result

Test Site	SIP-TR2	Test Engineer	Alisa Deng
Test Date	2022/03/06		

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11a	6Mbps	36	5180	29.72	17.43
802.11a	6Mbps	44	5220	30.16	17.72
802.11a	6Mbps	48	5240	30.56	17.37
802.11a	6Mbps	52	5260	28.22	17.55
802.11a	6Mbps	60	5300	30.14	17.87
802.11a	6Mbps	64	5320	28.68	17.36
802.11a	6Mbps	100	5500	25.71	17.29
802.11a	6Mbps	116	5580	24.24	17.06
802.11a	6Mbps	140	5700	29.50	17.17
802.11a	6Mbps	149	5745	23.74	17.09
802.11a	6Mbps	157	5785	25.93	17.19
802.11a	6Mbps	165	5825	23.18	16.98
802.11n-HT20	MCS0	36	5180	33.41	18.58
802.11n-HT20	MCS0	44	5220	32.59	18.36
802.11n-HT20	MCS0	48	5240	34.69	18.82
802.11n-HT20	MCS0	52	5260	34.16	18.68
802.11n-HT20	MCS0	60	5300	33.46	18.33
802.11n-HT20	MCS0	64	5320	32.73	18.64
802.11n-HT20	MCS0	100	5500	30.68	18.23
802.11n-HT20	MCS0	116	5580	28.99	18.14
802.11n-HT20	MCS0	140	5700	34.15	18.37
802.11n-HT20	MCS0	149	5745	25.73	18.05
802.11n-HT20	MCS0	157	5785	27.54	18.12
802.11n-HT20	MCS0	165	5825	28.10	18.15

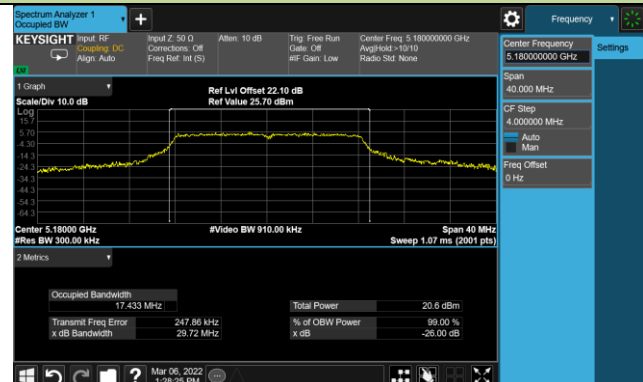
Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	F _H (MHz)	Limit (MHz)
802.11a	6Mbps	48	5240	5248.685	< 5250
802.11n-HT20	MCS0	48	5240	5249.410	< 5250

Note: $F_H = \text{Centre frequency} + 99\% \text{ OBW} / 2$

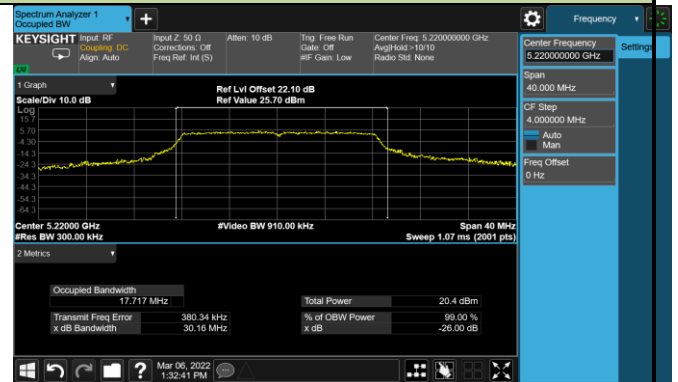
For example, 802.11a 5240MHz, $F_H = 5240 \text{ MHz} + 17.37 \text{ MHz} / 2 = 5248.685 \text{ MHz}$.

802.11a 26dB & 99% Bandwidth

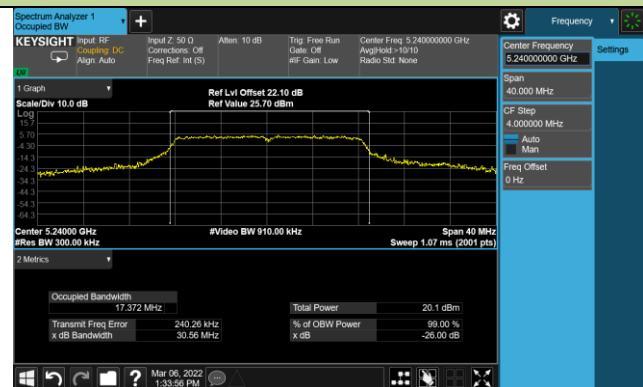
Channel 36 (5180MHz)



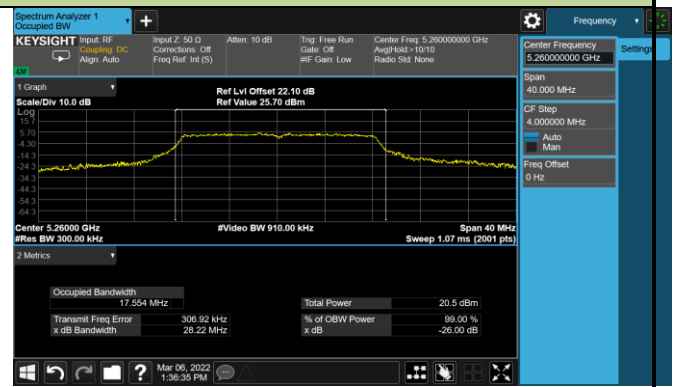
Channel 44 (5220MHz)



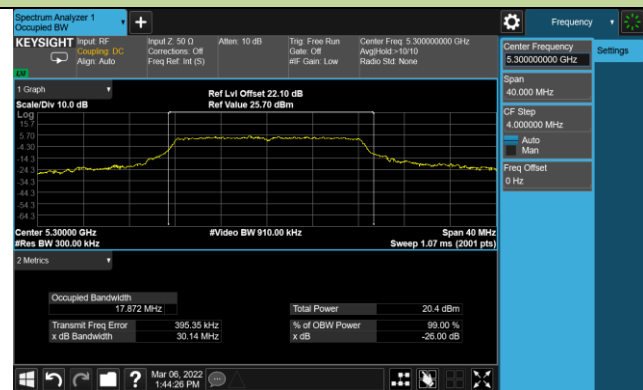
Channel 48 (5240MHz)



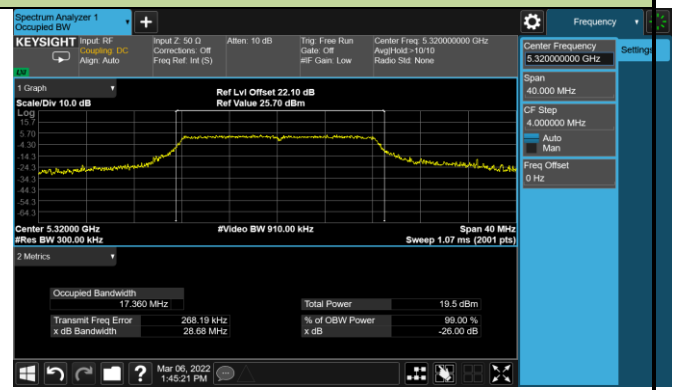
Channel 52 (5260MHz)

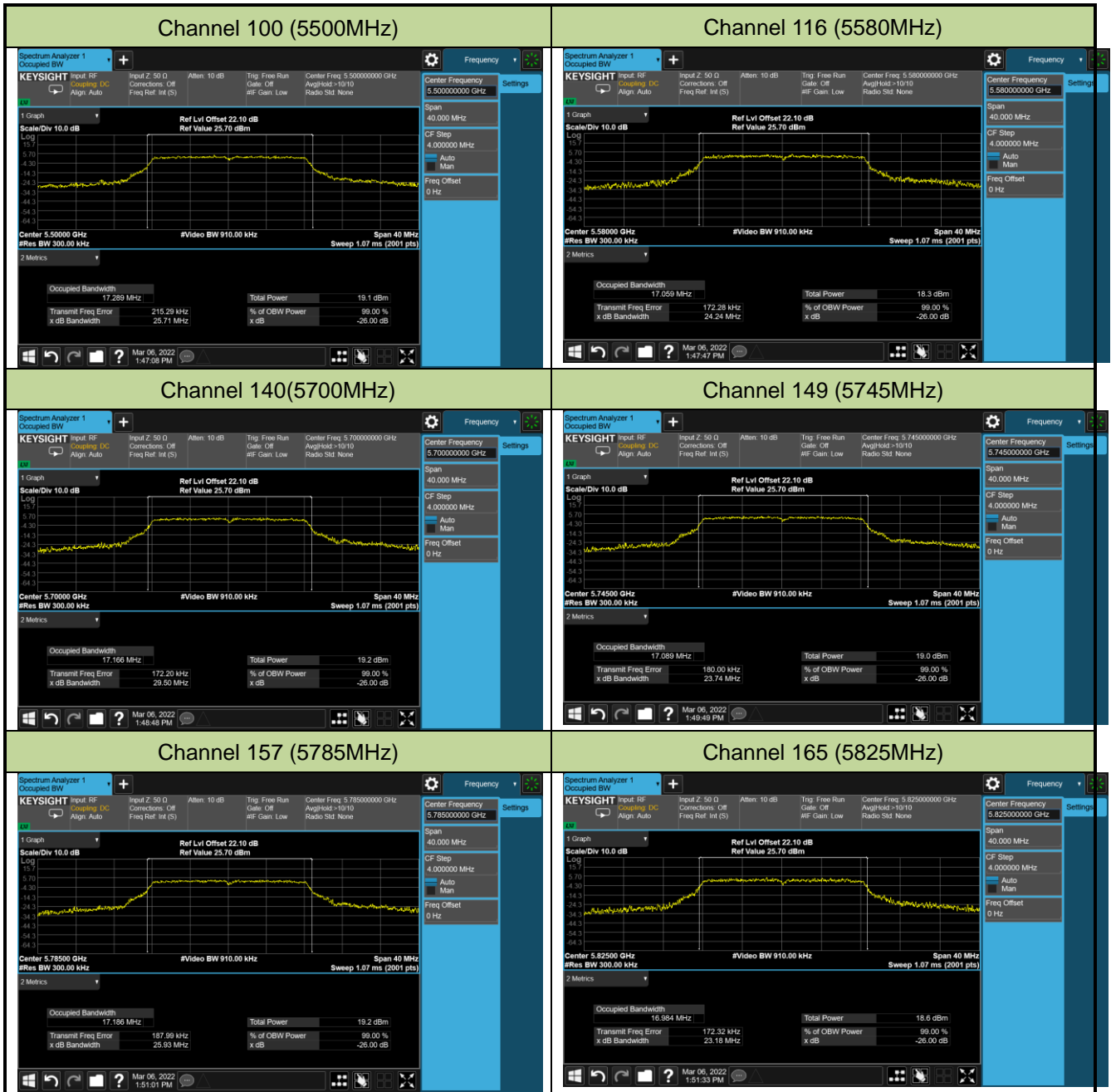


Channel 60 (5300MHz)



Channel 64 (5320MHz)



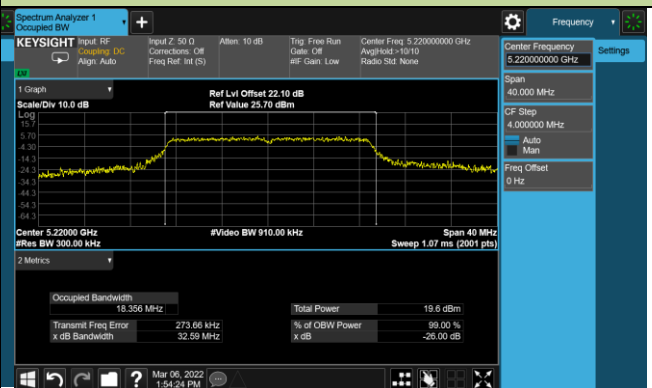


802.11n-HT20 26dB & 99% Bandwidth

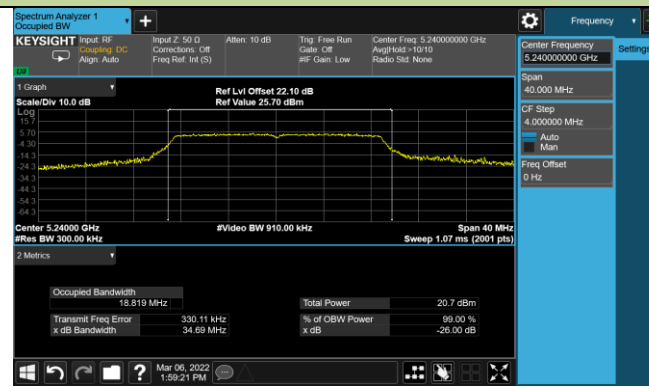
Channel 36 (5180MHz)



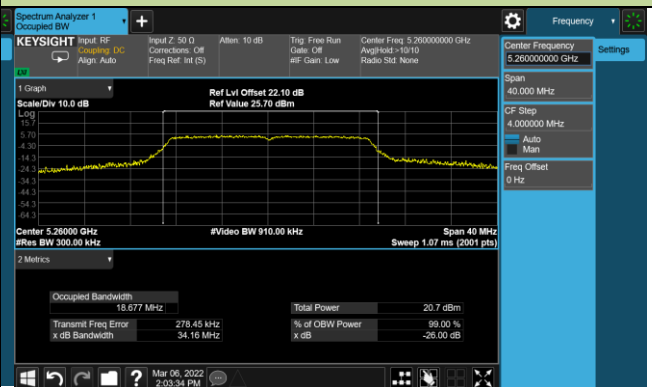
Channel 44 (5220MHz)



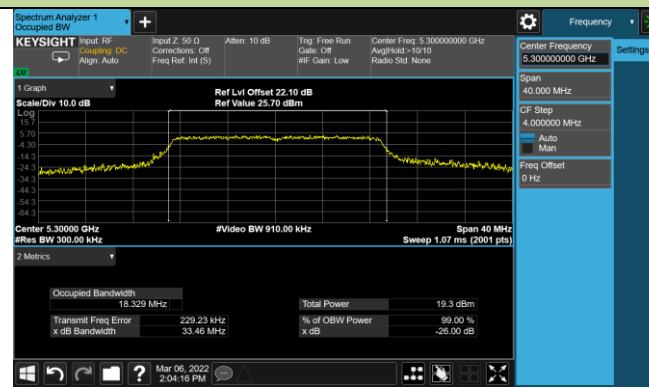
Channel 48 (5240MHz)



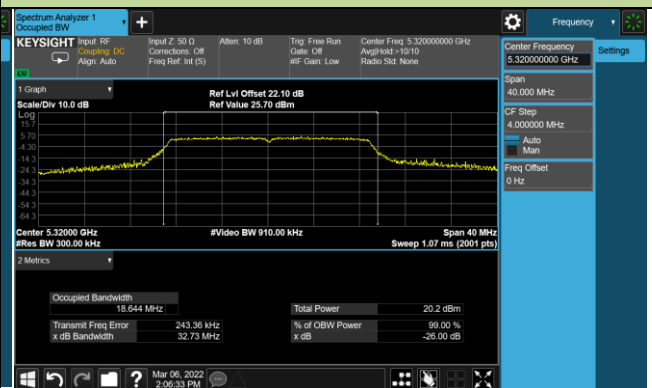
Channel 52 (5260MHz)

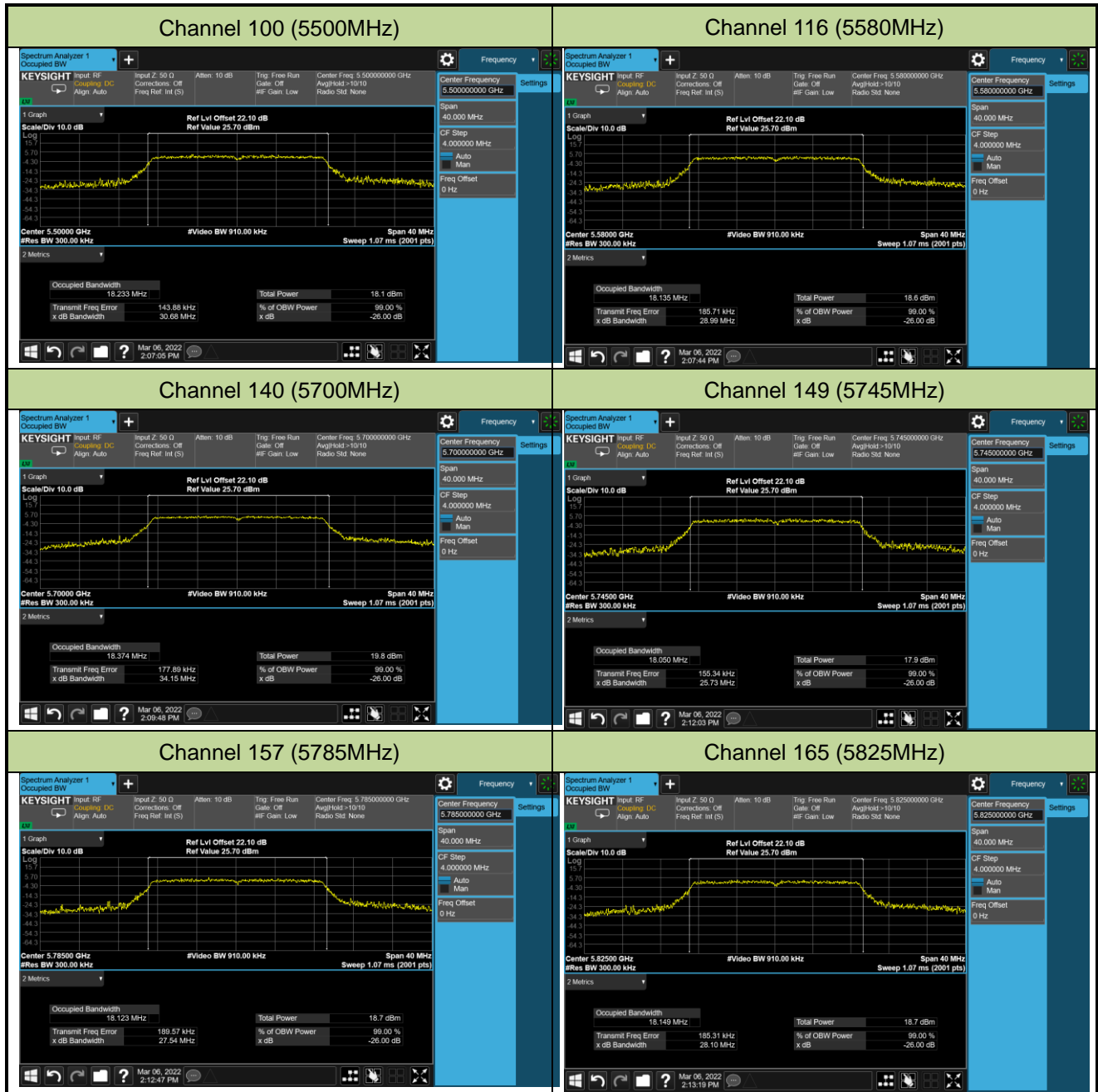


Channel 60 (5300MHz)



Channel 64 (5320MHz)

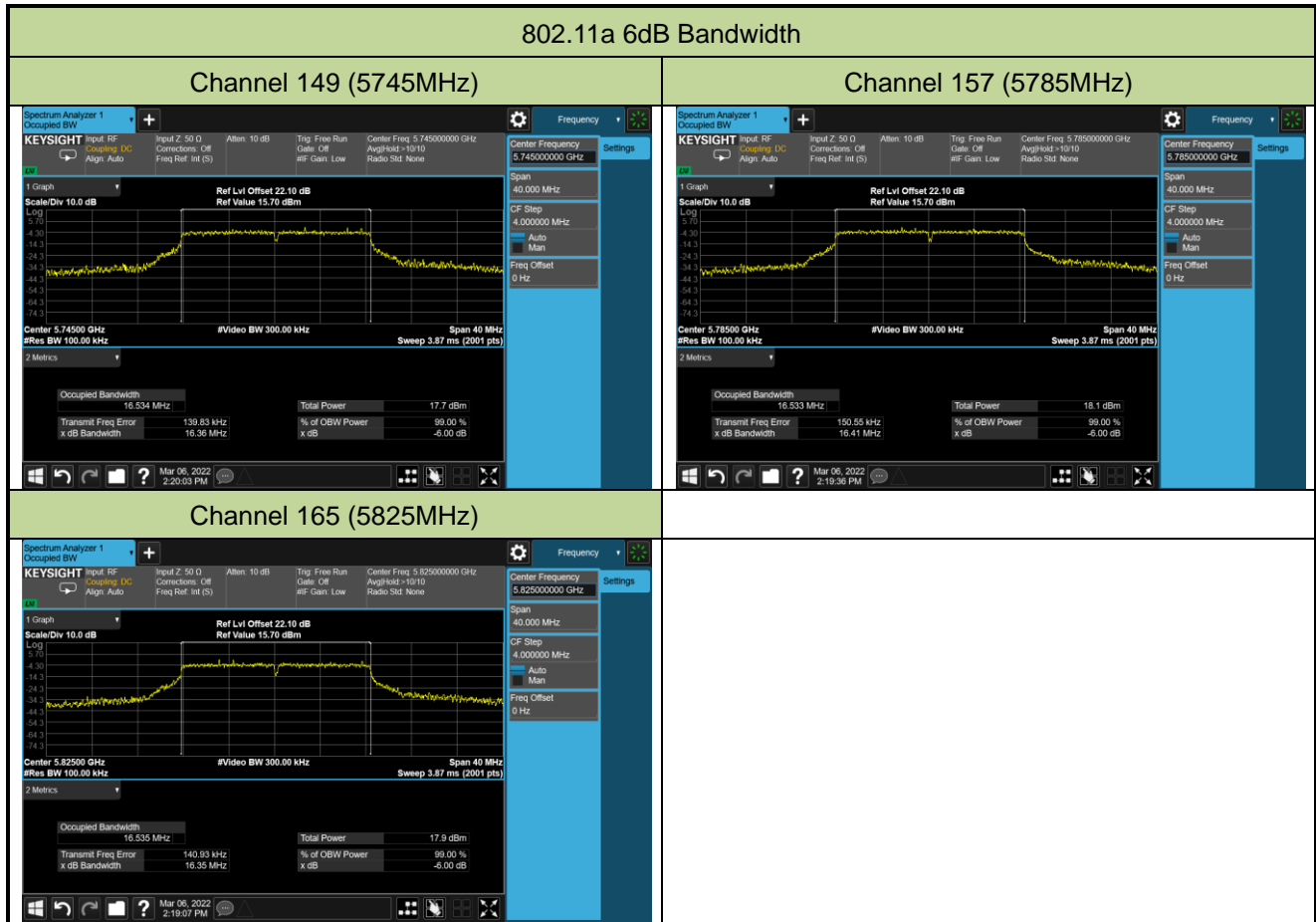


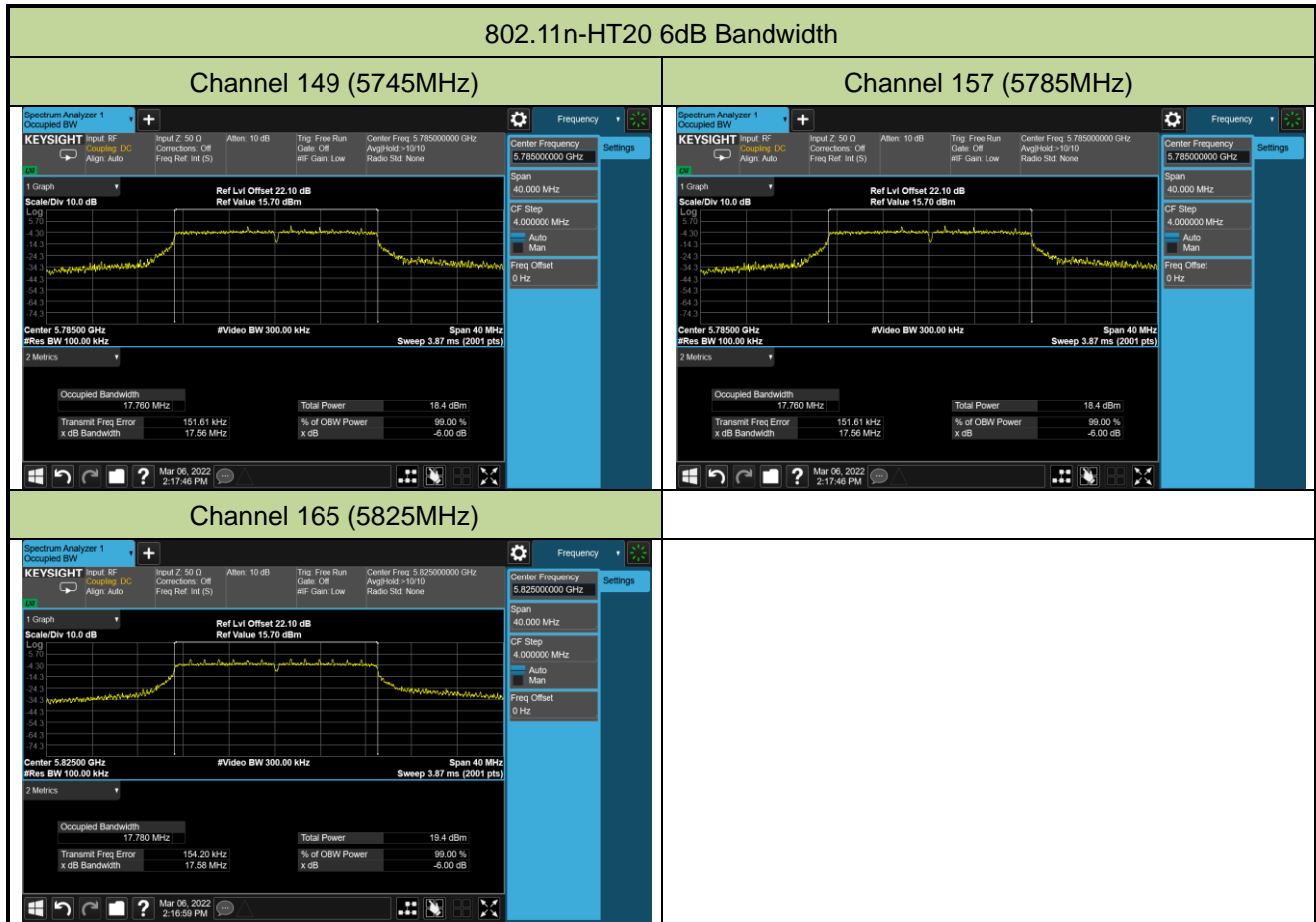


A.3 6dB Bandwidth Test Result

Test Site	SIP-TR2	Test Engineer	Alisa Deng
Test Date	2022/03/06		

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11a	6Mbps	149	5745	16.36	≥ 0.5	Pass
802.11a	6Mbps	157	5785	16.41	≥ 0.5	Pass
802.11a	6Mbps	165	5825	16.35	≥ 0.5	Pass
802.11n-HT20	MCS0	149	5745	17.61	≥ 0.5	Pass
802.11n-HT20	MCS0	157	5785	17.56	≥ 0.5	Pass
802.11n-HT20	MCS0	165	5825	17.58	≥ 0.5	Pass





A.4 Output Power Test Result

Output power test was verified over all data rates of each mode shown as below table, and then choose the maximum output power (gray marker) for final test of each channel.

Test Mode	Bandwidth	Channel No.	Frequency (MHz)	Data Rate/ MCS	Average Power (dBm)
802.11a	20	36	5180	6Mbps	13.85
				24Mbps	13.81
				54Mbps	13.40
802.11n	20	36	5180	Mcs0	13.95
				Mcs4	13.75
				Mcs7	12.98

Test Site	SIP-TR2	Test Engineer	Alisa Deng
Test Date	2022/03/06 ~ 2022/03/13		

Test Mode	Data Rate/ MCS	Ch. No.	Freq. (MHz)	Total Average Power (dBm)	Average Power Limit (dBm)
11a	6Mbps	36	5180	13.85	≤ 23.98
11a	6Mbps	44	5220	13.86	≤ 23.98
11a	6Mbps	48	5240	13.89	≤ 23.98
11a	6Mbps	52	5260	13.95	≤ 23.98
11a	6Mbps	60	5300	13.75	≤ 23.98
11a	6Mbps	64	5320	13.82	≤ 23.98
11a	6Mbps	100	5500	12.10	≤ 23.98
11a	6Mbps	116	5580	12.55	≤ 23.98
11a	6Mbps	140	5700	12.76	≤ 23.98
11a	6Mbps	149	5745	12.36	≤ 30.00
11a	6Mbps	157	5785	12.66	≤ 30.00
11a	6Mbps	165	5825	12.63	≤ 30.00
11n-HT20	MCS0	36	5180	13.16	≤ 23.98
11n-HT20	MCS0	44	5220	13.75	≤ 23.98
11n-HT20	MCS0	48	5240	13.64	≤ 23.98
11n-HT20	MCS0	52	5260	13.90	≤ 23.98
11n-HT20	MCS0	60	5300	13.80	≤ 23.98
11n-HT20	MCS0	64	5320	13.74	≤ 23.98
11n-HT20	MCS0	100	5500	10.36	≤ 23.98
11n-HT20	MCS0	116	5580	12.38	≤ 23.98
11n-HT20	MCS0	140	5700	10.95	≤ 23.98
11n-HT20	MCS0	149	5745	12.29	≤ 30.00
11n-HT20	MCS0	157	5785	12.56	≤ 30.00
11n-HT20	MCS0	165	5825	12.70	≤ 30.00

A.5 Power Spectral Density Test Result

Test Site	SIP-TR2	Test Engineer	Alisa Deng
Test Date	2022/03/06 ~ 2022/03/13		

Test Mode	Data Rate/ MCS	Ch. No.	Freq. (MHz)	PSD (dBm/MHz)	Duty Cycle (%)	Total PSD (dBm/MHz)	PSD Limit (dBm/ MHz)
11a	6Mbps	36	5180	2.53	98.56	2.59	≤ 11.00
11a	6Mbps	44	5220	2.19	98.56	2.25	≤ 11.00
11a	6Mbps	48	5240	2.09	98.56	2.15	≤ 11.00
11a	6Mbps	52	5260	2.18	98.56	2.24	≤ 11.00
11a	6Mbps	60	5300	1.63	98.56	1.69	≤ 11.00
11a	6Mbps	64	5320	1.66	98.56	1.72	≤ 11.00
11a	6Mbps	100	5500	-0.15	98.56	-0.09	≤ 11.00
11a	6Mbps	116	5580	1.02	98.56	1.08	≤ 11.00
11a	6Mbps	140	5700	1.31	98.56	1.37	≤ 11.00
11n-HT20	MCS0	36	5180	1.06	96.30	1.22	≤ 11.00
11n-HT20	MCS0	44	5220	1.61	96.30	1.77	≤ 11.00
11n-HT20	MCS0	48	5240	1.49	96.30	1.65	≤ 11.00
11n-HT20	MCS0	52	5260	1.46	96.30	1.62	≤ 11.00
11n-HT20	MCS0	60	5300	1.27	96.30	1.43	≤ 11.00
11n-HT20	MCS0	64	5320	1.36	96.30	1.52	≤ 11.00
11n-HT20	MCS0	100	5500	-2.16	96.30	-2.00	≤ 11.00
11n-HT20	MCS0	116	5580	0.54	96.30	0.70	≤ 11.00
11n-HT20	MCS0	140	5700	-0.89	96.30	-0.73	≤ 11.00

Note: The total PSD (dBm/MHz) = AVGPSD (dBm/MHz) +10*log (1/Duty cycle).

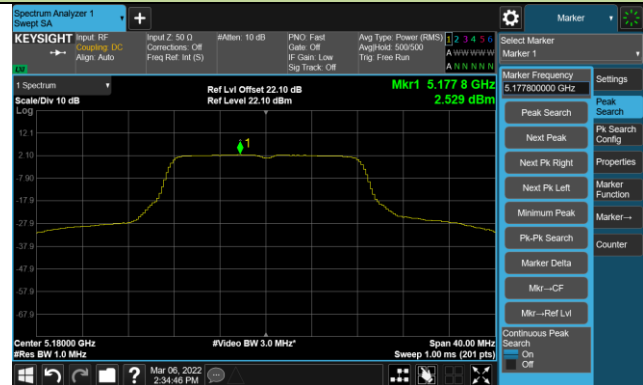
Test Site	SIP-TR2	Test Engineer	Alisa Deng
Test Date	2022/03/06 ~ 2022/03/13		

Test Mode	Data Rate/ MCS	Ch. No.	Freq. (MHz)	PSD (dBm/MHz)	Duty Cycle (%)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)
11a	6Mbps	149	5745	1.04	98.56	-1.91	≤ 30.00
11a	6Mbps	157	5785	1.19	98.56	-1.76	≤ 30.00
11a	6Mbps	165	5825	1.03	98.56	-1.92	≤ 30.00
11n-HT20	MCS0	149	5745	0.63	96.30	-2.22	≤ 30.00
11n-HT20	MCS0	157	5785	0.55	96.30	-2.30	≤ 30.00
11n-HT20	MCS0	165	5825	0.65	96.30	-2.20	≤ 30.00

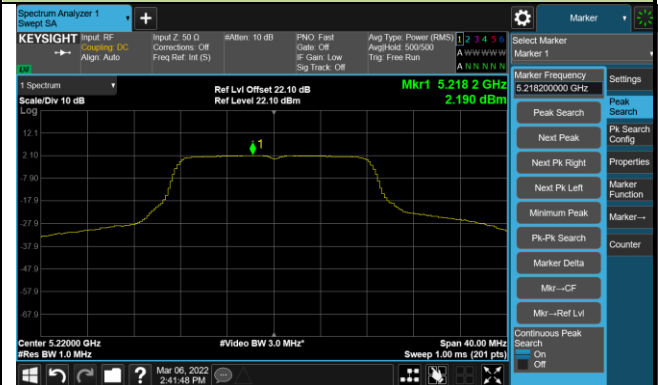
Note: The total PSD (dBm/500kHz) = AVGPSD (dBm/MHz) + 10*log (1/Duty cycle) + 10Log(500kHz/1MHz).

802.11a Power Spectral Density

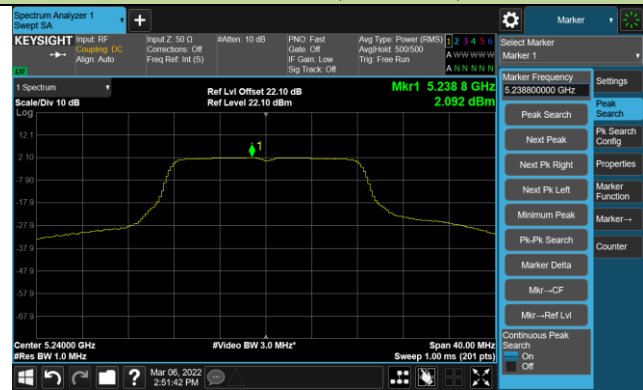
Channel 36 (5180MHz)



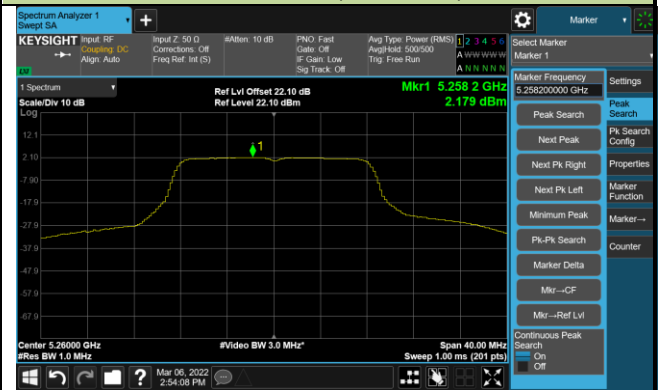
Channel 44 (5220MHz)



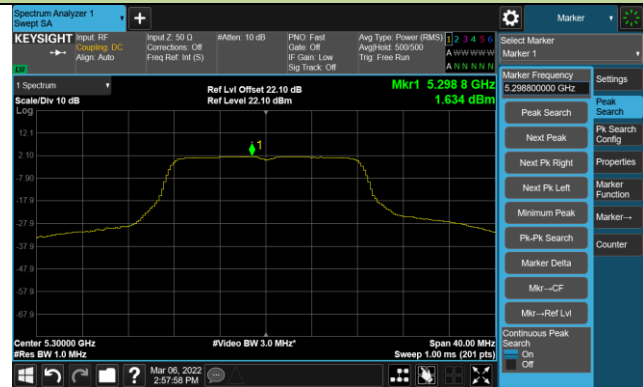
Channel 48 (5240MHz)



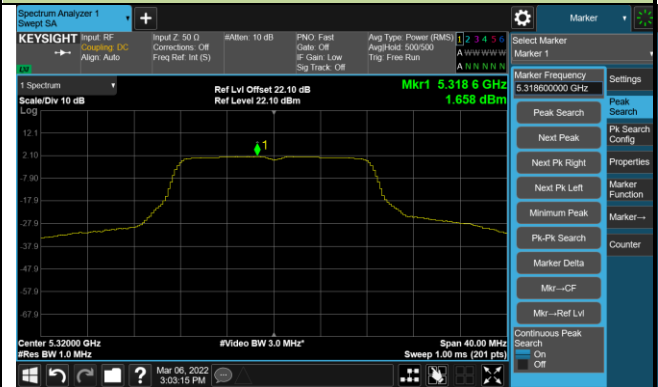
Channel 52 (5260MHz)



Channel 60 (5300MHz)



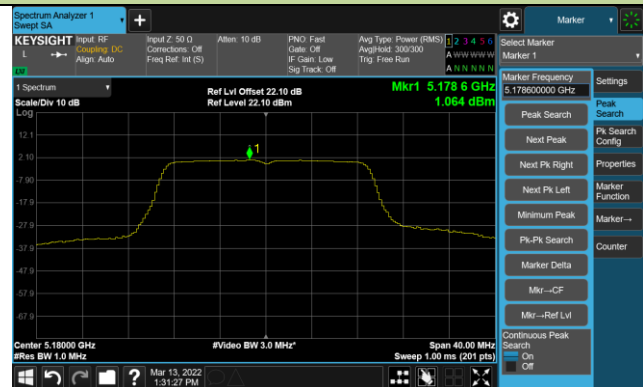
Channel 64 (5320MHz)



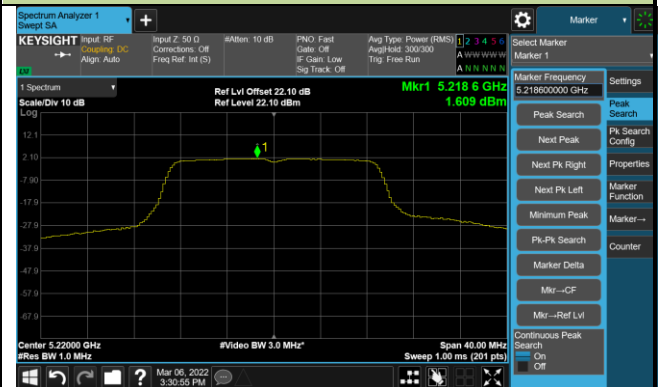


802.11n-HT20 Power Spectral Density

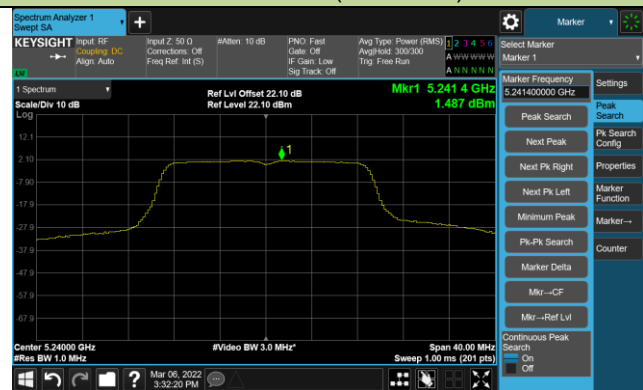
Channel 36 (5180MHz)



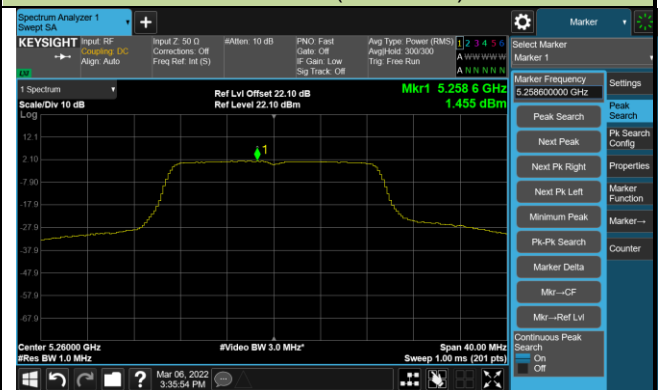
Channel 44 (5220MHz)



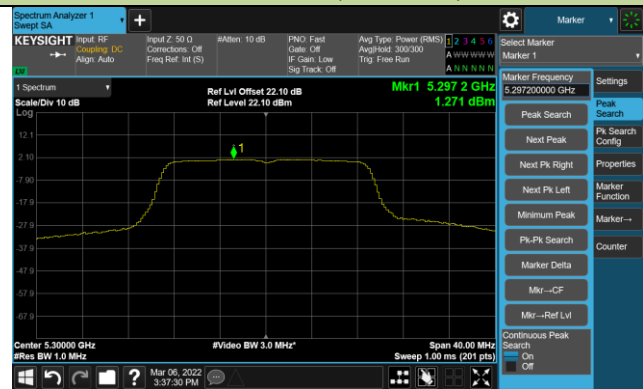
Channel 48 (5240MHz)



Channel 52 (5260MHz)



Channel 60 (5300MHz)



Channel 64 (5320MHz)





A.6 Frequency Stability Test Result

Test Site	SIP-TR1	Test Engineer	Alisa Deng
Test Date	2022/04/11	Test Mode	5300MHz (Carrier Mode)

Voltage (%)	Power (V _{DC})	Temp (°C)	Frequency Tolerance (ppm)			
			0 minutes	2 minutes	5 minutes	10 minutes
100%	120	-30	0.78	0.99	1.39	1.95
		- 20	-0.65	-0.55	-0.42	-0.11
		- 10	-0.68	-0.73	-0.76	-0.75
		0	-0.01	-0.07	-0.15	-0.29
		+ 10	1.33	0.91	0.58	0.27
		+ 20	3.70	3.45	2.93	2.29
		+ 30	8.30	7.43	6.85	5.75
		+ 40	10.48	10.34	10.11	9.99
		+ 50	10.42	11.07	11.47	11.80
115%	138	+ 20	2.95	3.37	3.89	4.26
85%t	102	+ 20	1.04	1.43	2.00	2.69

Note 1: Frequency Tolerance (ppm) = {[Measured Frequency (MHz) - Declared Frequency (MHz)] / Declared Frequency (MHz)} *10⁶.

A.7 Radiated Spurious Emission Measurement Test Result

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11a – Channel 36
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	7392.0	53.0	-6.4	46.6	74.0	-27.4	Peak	Horizontal
*	8777.5	48.5	-4.0	44.5	68.2	-23.7	Peak	Horizontal
*	10256.5	47.3	-3.3	44.0	68.2	-24.2	Peak	Horizontal
	11072.5	50.6	-3.3	47.3	74.0	-26.7	Peak	Horizontal
*	7213.5	49.8	-6.6	43.2	68.2	-25.0	Peak	Vertical
	8242.0	51.8	-5.0	46.8	74.0	-27.2	Peak	Vertical
*	10086.5	47.6	-3.1	44.5	68.2	-23.7	Peak	Vertical
	11710.0	50.9	-3.7	47.2	74.0	-26.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11a – Channel 44
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	7392.0	52.5	-6.4	46.1	74.0	-27.9	Peak	Horizontal
*	8709.5	48.6	-4.1	44.5	68.2	-23.7	Peak	Horizontal
*	10061.0	47.7	-3.4	44.3	68.2	-23.9	Peak	Horizontal
	12551.5	51.0	-2.5	48.5	74.0	-25.5	Peak	Horizontal
*	7120.0	49.9	-6.7	43.2	68.2	-25.0	Peak	Vertical
	8335.5	50.6	-4.9	45.7	74.0	-28.3	Peak	Vertical
*	9814.5	48.6	-3.5	45.1	68.2	-23.1	Peak	Vertical
	12330.5	51.1	-2.9	48.2	74.0	-25.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11a – Channel 48
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	7392.0	54.4	-6.4	48.0	74.0	-26.0	Peak	Horizontal
*	8786.0	48.4	-4.0	44.4	68.2	-23.8	Peak	Horizontal
*	9916.5	47.9	-3.4	44.5	68.2	-23.7	Peak	Horizontal
	11064.0	50.5	-3.3	47.2	74.0	-26.8	Peak	Horizontal
	7426.0	52.1	-6.3	45.8	74.0	-28.2	Peak	Vertical
*	8845.5	48.2	-4.0	44.2	68.2	-24.0	Peak	Vertical
*	9712.5	48.2	-3.2	45.0	68.2	-23.2	Peak	Vertical
	11990.5	50.4	-3.0	47.4	74.0	-26.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11a – Channel 52
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	7392.0	53.5	-6.4	47.1	74.0	-26.9	Peak	Horizontal
*	8684.0	48.5	-4.1	44.4	68.2	-23.8	Peak	Horizontal
*	9814.5	47.2	-3.5	43.7	68.2	-24.5	Peak	Horizontal
	11132.0	50.5	-3.5	47.0	74.0	-27.0	Peak	Horizontal
*	7995.5	49.1	-5.7	43.4	68.2	-24.8	Peak	Vertical
	9457.5	50.9	-3.5	47.4	74.0	-26.6	Peak	Vertical
*	10273.5	47.1	-3.2	43.9	68.2	-24.3	Peak	Vertical
	11582.5	50.8	-3.6	47.2	74.0	-26.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11a – Channel 60
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	7392.0	53.7	-6.4	47.3	74.0	-26.7	Peak	Horizontal
*	8701.0	48.4	-4.2	44.2	68.2	-24.0	Peak	Horizontal
*	9814.5	47.3	-3.5	43.8	68.2	-24.4	Peak	Horizontal
	11727.0	52.0	-3.7	48.3	74.0	-25.7	Peak	Horizontal
	7392.0	52.6	-6.4	46.2	74.0	-27.8	Peak	Vertical
*	8794.5	48.4	-4.0	44.4	68.2	-23.8	Peak	Vertical
*	10086.5	47.6	-3.1	44.5	68.2	-23.7	Peak	Vertical
	11174.5	50.4	-3.4	47.0	74.0	-27.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11a – Channel 64
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	7392.0	54.2	-6.4	47.8	74.0	-26.2	Peak	Horizontal
*	8777.5	48.2	-4.0	44.2	68.2	-24.0	Peak	Horizontal
*	10095.0	47.5	-3.1	44.4	68.2	-23.8	Peak	Horizontal
	11812.0	51.0	-3.7	47.3	74.0	-26.7	Peak	Horizontal
	7494.0	51.4	-6.3	45.1	74.0	-28.9	Peak	Vertical
*	8777.5	48.2	-4.0	44.2	68.2	-24.0	Peak	Vertical
*	9814.5	48.0	-3.5	44.5	68.2	-23.7	Peak	Vertical
	11055.5	49.7	-3.3	46.4	74.0	-27.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11a – Channel 100
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	7392.0	52.8	-6.4	46.4	74.0	-27.6	Peak	Horizontal
*	8777.5	48.2	-4.0	44.2	68.2	-24.0	Peak	Horizontal
*	9823.0	47.7	-3.6	44.1	68.2	-24.1	Peak	Horizontal
	12339.0	50.9	-3.0	47.9	74.0	-26.1	Peak	Horizontal
	7392.0	52.3	-6.4	45.9	74.0	-28.1	Peak	Vertical
*	8777.5	48.2	-4.0	44.2	68.2	-24.0	Peak	Vertical
*	10052.5	47.4	-3.3	44.1	68.2	-24.1	Peak	Vertical
	11710.0	51.4	-3.7	47.7	74.0	-26.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11a – Channel 116
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB/m)	Detector	Polarization
	7392.0	52.3	-6.4	45.9	74.0	-28.1	Peak	Horizontal
*	8777.5	48.2	-4.0	44.2	68.2	-24.0	Peak	Horizontal
	9806.0	47.6	-3.5	44.1	68.2	-24.1	Peak	Horizontal
	12084.0	51.1	-3.2	47.9	74.0	-26.1	Peak	Horizontal
	7392.0	52.1	-6.4	45.7	74.0	-28.3	Peak	Vertical
	8777.5	48.2	-4.0	44.2	68.2	-24.0	Peak	Vertical
*	9814.5	48.2	-3.5	44.7	68.2	-23.5	Peak	Vertical
	11659.0	51.4	-3.4	48.0	74.0	-26.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11a – Channel 140
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	7392.0	54.1	-6.4	47.7	74.0	-26.3	Peak	Horizontal
*	8777.5	48.2	-4.0	44.2	68.2	-24.0	Peak	Horizontal
*	9874.0	48.1	-3.0	45.1	68.2	-23.1	Peak	Horizontal
	11990.5	50.6	-3.0	47.6	74.0	-26.4	Peak	Horizontal
	7349.5	51.3	-6.4	44.9	74.0	-29.1	Peak	Vertical
*	8777.5	48.2	-4.0	44.2	68.2	-24.0	Peak	Vertical
*	9806.0	47.6	-3.5	44.1	68.2	-24.1	Peak	Vertical
	11055.5	50.4	-3.3	47.1	74.0	-26.9	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11a – Channel 149
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	7392.0	52.3	-6.4	45.9	74.0	-28.1	Peak	Horizontal
*	8777.5	48.2	-4.0	44.2	68.2	-24.0	Peak	Horizontal
*	10273.5	47.4	-3.2	44.2	68.2	-24.0	Peak	Horizontal
	11642.0	50.5	-3.5	47.0	74.0	-27.0	Peak	Horizontal
	7392.0	54.0	-6.4	47.6	74.0	-26.4	Peak	Vertical
*	8777.5	48.2	-4.0	44.2	68.2	-24.0	Peak	Vertical
*	9993.0	48.0	-3.1	44.9	68.2	-23.3	Peak	Vertical
	12211.5	50.7	-2.9	47.8	74.0	-26.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11a – Channel 157
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	7392.0	52.1	-6.4	45.7	74.0	-28.3	Peak	Horizontal
*	8777.5	48.2	-4.0	44.2	68.2	-24.0	Peak	Horizontal
*	10248.0	47.5	-3.3	44.2	68.2	-24.0	Peak	Horizontal
	12313.5	50.2	-2.8	47.4	74.0	-26.6	Peak	Horizontal
*	7077.5	51.0	-6.8	44.2	68.2	-24.0	Peak	Vertical
	8463.0	50.8	-4.4	46.4	74.0	-27.6	Peak	Vertical
*	9746.5	48.2	-3.5	44.7	68.2	-23.5	Peak	Vertical
	12492.0	50.1	-2.7	47.4	74.0	-26.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11a – Channel 165
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB/m)	Detector	Polarization
*	7077.5	51.0	-6.8	44.2	68.2	-24.0	Peak	Horizontal
*	9636.0	48.4	-3.3	45.1	68.2	-23.1	Peak	Horizontal
	11897.0	50.9	-3.2	47.7	74.0	-26.3	Peak	Horizontal
	15824.0	46.5	3.6	50.1	74.0	-23.9	Peak	Horizontal
	7392.0	52.2	-6.4	45.8	74.0	-28.2	Peak	Vertical
*	8760.5	49.1	-4.0	45.1	68.2	-23.1	Peak	Vertical
*	10035.5	47.9	-3.3	44.6	68.2	-23.6	Peak	Vertical
	15560.5	46.4	2.5	48.9	74.0	-25.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11n-HT20 – Channel 36
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB/m)	Detector	Polarization
*	7043.5	51.5	-6.9	44.6	68.2	-23.6	Peak	Horizontal
	8454.5	51.6	-4.5	47.1	74.0	-26.9	Peak	Horizontal
*	10061.0	47.5	-3.4	44.1	68.2	-24.1	Peak	Horizontal
	12407.0	49.7	-2.5	47.2	74.0	-26.8	Peak	Horizontal
*	7120.0	50.9	-6.7	44.2	68.2	-24.0	Peak	Vertical
*	10052.5	48.0	-3.3	44.7	68.2	-23.5	Peak	Vertical
	12194.5	50.8	-3.1	47.7	74.0	-26.3	Peak	Vertical
	15467.0	47.9	3.0	50.9	74.0	-23.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11n-HT20 – Channel 44
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB/m)	Detector	Polarization
	7392.0	53.8	-6.4	47.4	74.0	-26.6	Peak	Horizontal
*	8692.5	48.4	-4.1	44.3	68.2	-23.9	Peak	Horizontal
*	10231.0	47.4	-3.1	44.3	68.2	-23.9	Peak	Horizontal
	15458.5	47.9	3.0	50.9	74.0	-23.1	Peak	Horizontal
*	8692.5	48.4	-4.1	44.3	68.2	-23.9	Peak	Vertical
*	9908.0	48.1	-3.4	44.7	68.2	-23.5	Peak	Vertical
	12543.0	50.3	-2.4	47.9	74.0	-26.1	Peak	Vertical
	15790.0	46.8	2.7	49.5	74.0	-24.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11n-HT20 – Channel 48
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	7392.0	54.4	-6.4	48.0	74.0	-26.0	Peak	Horizontal
*	8692.5	48.4	-4.1	44.3	68.2	-23.9	Peak	Horizontal
*	10265.0	47.0	-3.2	43.8	68.2	-24.4	Peak	Horizontal
	11157.5	50.0	-3.3	46.7	74.0	-27.3	Peak	Horizontal
*	7077.5	51.9	-6.8	45.1	68.2	-23.1	Peak	Vertical
	8454.5	51.3	-4.5	46.8	74.0	-27.2	Peak	Vertical
*	10273.5	47.4	-3.2	44.2	68.2	-24.0	Peak	Vertical
	11684.5	50.2	-3.5	46.7	74.0	-27.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11n-HT20 – Channel 52
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB/m)	Detector	Polarization
	7392.0	52.3	-6.4	45.9	74.0	-28.1	Peak	Horizontal
*	8692.5	48.4	-4.1	44.3	68.2	-23.9	Peak	Horizontal
*	9806.0	47.5	-3.5	44.0	68.2	-24.2	Peak	Horizontal
	12534.5	50.2	-2.4	47.8	74.0	-26.2	Peak	Horizontal
*	8692.5	48.4	-4.1	44.3	68.2	-23.9	Peak	Vertical
*	10001.5	47.6	-3.1	44.5	68.2	-23.7	Peak	Vertical
	11837.5	51.2	-4.0	47.2	74.0	-26.8	Peak	Vertical
	15637.0	46.7	2.6	49.3	74.0	-24.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11n-HT20 – Channel 60
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB/m)	Detector	Polarization
*	7086.0	51.4	-6.8	44.6	68.2	-23.6	Peak	Horizontal
	8157.0	51.0	-5.2	45.8	74.0	-28.2	Peak	Horizontal
*	10180.0	47.5	-3.0	44.5	68.2	-23.7	Peak	Horizontal
	11718.5	50.4	-3.7	46.7	74.0	-27.3	Peak	Horizontal
*	7077.5	50.4	-6.8	43.6	68.2	-24.6	Peak	Vertical
*	9857.0	47.7	-3.2	44.5	68.2	-23.7	Peak	Vertical
	11642.0	50.6	-3.5	47.1	74.0	-26.9	Peak	Vertical
	15467.0	46.3	3.0	49.3	74.0	-24.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11n-HT20 – Channel 64
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
	7392.0	53.1	-6.4	46.7	74.0	-27.3	Peak	Horizontal
*	8905.0	48.2	-4.0	44.2	68.2	-24.0	Peak	Horizontal
*	9814.5	48.1	-3.5	44.6	68.2	-23.6	Peak	Horizontal
	12296.5	50.1	-2.9	47.2	74.0	-26.8	Peak	Horizontal
*	7145.5	50.2	-6.6	43.6	68.2	-24.6	Peak	Vertical
*	9942.0	47.9	-3.3	44.6	68.2	-23.6	Peak	Vertical
	11642.0	51.6	-3.5	48.1	74.0	-25.9	Peak	Vertical
	15645.5	46.3	2.8	49.1	74.0	-24.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11n-HT20 – Channel 100
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB/m)	Detector	Polarization
	7392.0	53.4	-6.4	47.0	74.0	-27.0	Peak	Horizontal
*	8743.5	50.3	-4.0	46.3	68.2	-21.9	Peak	Horizontal
*	10273.5	47.1	-3.2	43.9	68.2	-24.3	Peak	Horizontal
	12313.5	50.6	-2.8	47.8	74.0	-26.2	Peak	Horizontal
	7392.0	53.0	-6.4	46.6	74.0	-27.4	Peak	Vertical
*	8743.5	50.3	-4.0	46.3	68.2	-21.9	Peak	Vertical
*	9814.5	48.4	-3.5	44.9	68.2	-23.3	Peak	Vertical
	12636.5	50.6	-2.4	48.2	74.0	-25.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11n-HT20 – Channel 116
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB/m)	Detector	Polarization
*	7171.0	50.3	-6.8	43.5	68.2	-24.7	Peak	Horizontal
*	9806.0	48.1	-3.5	44.6	68.2	-23.6	Peak	Horizontal
	11999.0	50.9	-3.0	47.9	74.0	-26.1	Peak	Horizontal
	15467.0	47.8	3.0	50.8	74.0	-23.2	Peak	Horizontal
*	7171.0	50.3	-6.8	43.5	68.2	-24.7	Peak	Vertical
*	9797.5	48.1	-3.2	44.9	68.2	-23.3	Peak	Vertical
	10979.0	50.7	-3.1	47.6	74.0	-26.4	Peak	Vertical
	15662.5	47.3	2.8	50.1	74.0	-23.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11n-HT20 – Channel 140
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
*	7171.0	50.3	-6.8	43.5	68.2	-24.7	Peak	Horizontal
*	9908.0	47.5	-3.4	44.1	68.2	-24.1	Peak	Horizontal
	11387.0	50.7	-3.6	47.1	74.0	-26.9	Peak	Horizontal
	15917.5	46.8	3.0	49.8	74.0	-24.2	Peak	Horizontal
*	7171.0	50.3	-6.8	43.5	68.2	-24.7	Peak	Vertical
*	9806.0	47.5	-3.5	44.0	68.2	-24.2	Peak	Vertical
	11914.0	50.9	-3.3	47.6	74.0	-26.4	Peak	Vertical
	15645.5	47.8	2.8	50.6	74.0	-23.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11n-HT20 – Channel 149
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB/m)	Detector	Polarization
*	7171.0	50.3	-6.8	43.5	68.2	-24.7	Peak	Horizontal
	8344.0	50.8	-4.8	46.0	74.0	-28.0	Peak	Horizontal
*	10299.0	47.3	-2.9	44.4	68.2	-23.8	Peak	Horizontal
	12279.5	51.1	-3.2	47.9	74.0	-26.1	Peak	Horizontal
*	7171.0	50.3	-6.8	43.5	68.2	-24.7	Peak	Vertical
	8131.5	51.1	-5.2	45.9	74.0	-28.1	Peak	Vertical
*	9814.5	47.6	-3.5	44.1	68.2	-24.1	Peak	Vertical
	12602.5	50.1	-2.3	47.8	74.0	-26.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11n-HT20 – Channel 157
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB/m)	Measure Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB/m)	Detector	Polarization
*	7154.0	51.6	-6.6	45.0	68.2	-23.2	Peak	Horizontal
*	8658.5	48.9	-4.0	44.9	68.2	-23.3	Peak	Horizontal
	11633.5	51.7	-3.6	48.1	74.0	-25.9	Peak	Horizontal
	15492.5	46.9	2.7	49.6	74.0	-24.4	Peak	Horizontal
*	7171.0	50.3	-6.8	43.5	68.2	-24.7	Peak	Vertical
	8140.0	52.4	-5.1	47.3	74.0	-26.7	Peak	Vertical
*	9942.0	48.4	-3.3	45.1	68.2	-23.1	Peak	Vertical
	12084.0	50.8	-3.2	47.6	74.0	-26.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Site	SIP-AC3	Test Engineer	Allen Zou
Test Date	2022/03/11	Test Mode	802.11n-HT20 – Channel 165
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB/m)	Detector	Polarization
*	7171.0	50.3	-6.8	43.5	68.2	-24.7	Peak	Horizontal
	8131.5	51.8	-5.2	46.6	74.0	-27.4	Peak	Horizontal
*	10452.0	47.6	-3.3	44.3	68.2	-23.9	Peak	Horizontal
	12126.5	50.5	-3.1	47.4	74.0	-26.6	Peak	Horizontal
*	7171.0	50.3	-6.8	43.5	68.2	-24.7	Peak	Vertical
*	9814.5	48.1	-3.5	44.6	68.2	-23.6	Peak	Vertical
	11310.5	50.9	-3.4	47.5	74.0	-26.5	Peak	Vertical
	15849.5	46.5	3.3	49.8	74.0	-24.2	Peak	Vertical

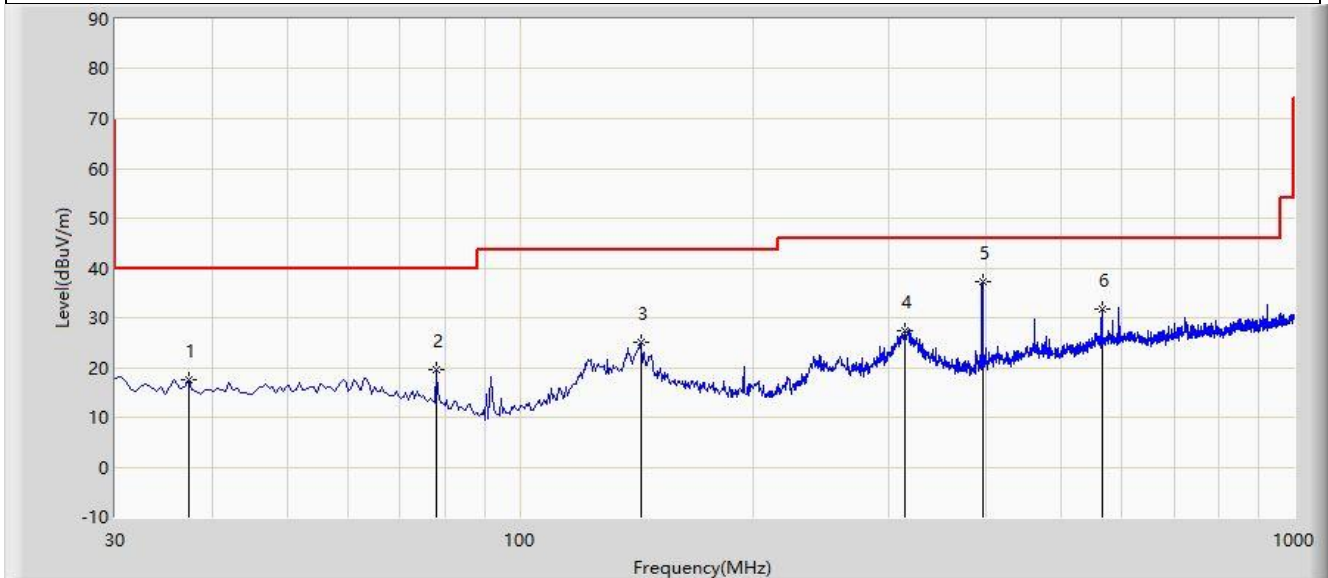
Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Result of Radiated Emission below 1GHz:

Site: SIP-AC2	Time: 2022/04/11 - 20:52
Limit: FCC_Part15.209_RSE(3m)	Engineer: Allen Zou
Probe: SIP-AC2_VULB 9168_30-1000MHz	Polarity: Horizontal
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test Mode: Transmit at 5180MHz by 802.11a	



No	Flag	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1			37.275	17.650	-0.023	-22.350	40.000	17.673	PK
2			78.015	19.495	4.626	-20.505	40.000	14.869	PK
3			143.490	24.975	6.637	-18.525	43.500	18.338	PK
4			313.725	27.314	7.861	-18.686	46.000	19.453	PK
5		*	396.175	37.365	16.115	-8.635	46.000	21.250	PK
6			564.470	31.794	7.110	-14.206	46.000	24.684	PK

Note 1: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

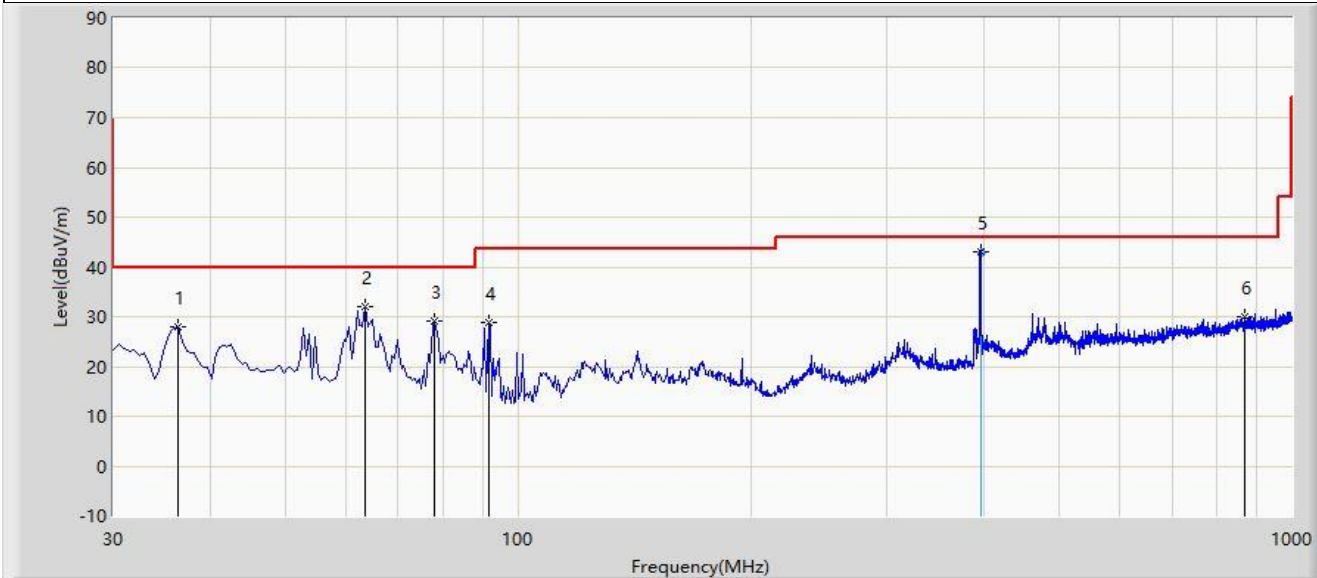
Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: QP measurement was not performed when peak measure level was lower than the QP limit.

Note 3: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

Site: SIP-AC2	Time: 2022/04/11 - 20:54
Limit: FCC_Part15.209_RSE(3m)	Engineer: Allen Zou
Probe: SIP-AC2_VULB 9168_30-1000MHz	Polarity: Vertical
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test Mode: Transmit at 5180MHz by 802.11a	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			36.305	27.871	10.262	-12.129	40.000	17.609	PK
2			63.465	32.159	14.607	-7.841	40.000	17.551	PK
3			78.015	29.227	14.358	-10.773	40.000	14.869	PK
4			91.595	28.722	15.680	-14.778	43.500	13.043	PK
5		*	395.994	43.148	21.900	-2.852	46.000	21.248	QP
6			868.080	29.933	0.070	-16.067	46.000	29.863	PK

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: QP measurement was not performed when peak measure level was lower than the QP limit.

Note 3: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

A.8 Radiated Restricted Band Edge Test Result

Site: SIP-AC3	Time: 2022/03/10 - 21:58
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Horizontal
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5180MHz by 802.11a	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			5146.810	69.059	72.305	-4.941	74.000	-3.246	PK
2			5150.000	65.958	68.419	-8.042	74.000	-2.462	PK
3		*	5186.545	102.892	67.246	N/A	N/A	35.646	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 22:13
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Horizontal
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5180MHz by 802.11a	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			5150.000	50.523	52.984	-3.477	54.000	-2.462	AV
2		*	5185.960	94.402	58.782	N/A	N/A	35.619	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 01:00
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Vertical
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5180MHz by 802.11a	

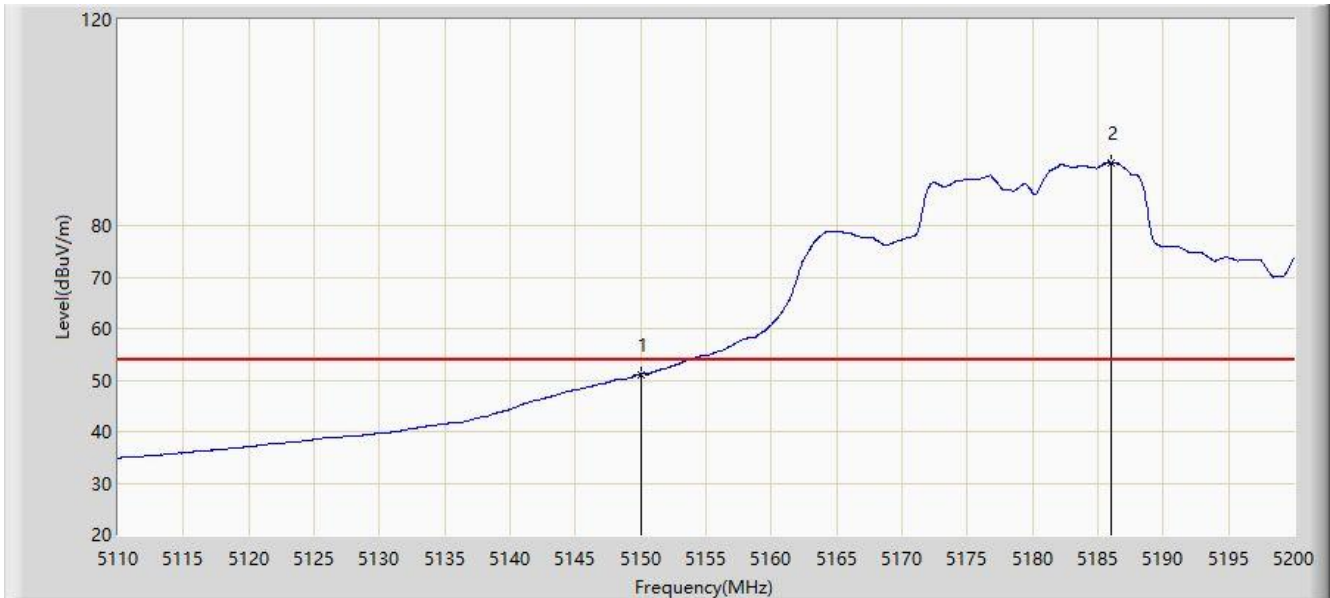


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			5146.810	67.972	71.218	-6.028	74.000	-3.246	PK
2			5150.000	64.606	67.067	-9.394	74.000	-2.462	PK
3		*	5186.140	102.375	66.747	N/A	N/A	35.628	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 21:55
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Vertical
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5180MHz by 802.11a	



No	Flag	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1			5150.000	51.154	53.615	-2.846	54.000	-2.462	AV
2		*	5185.960	92.242	56.622	N/A	N/A	35.619	AV

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 22:28
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Horizontal
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5320MHz by 802.11a	

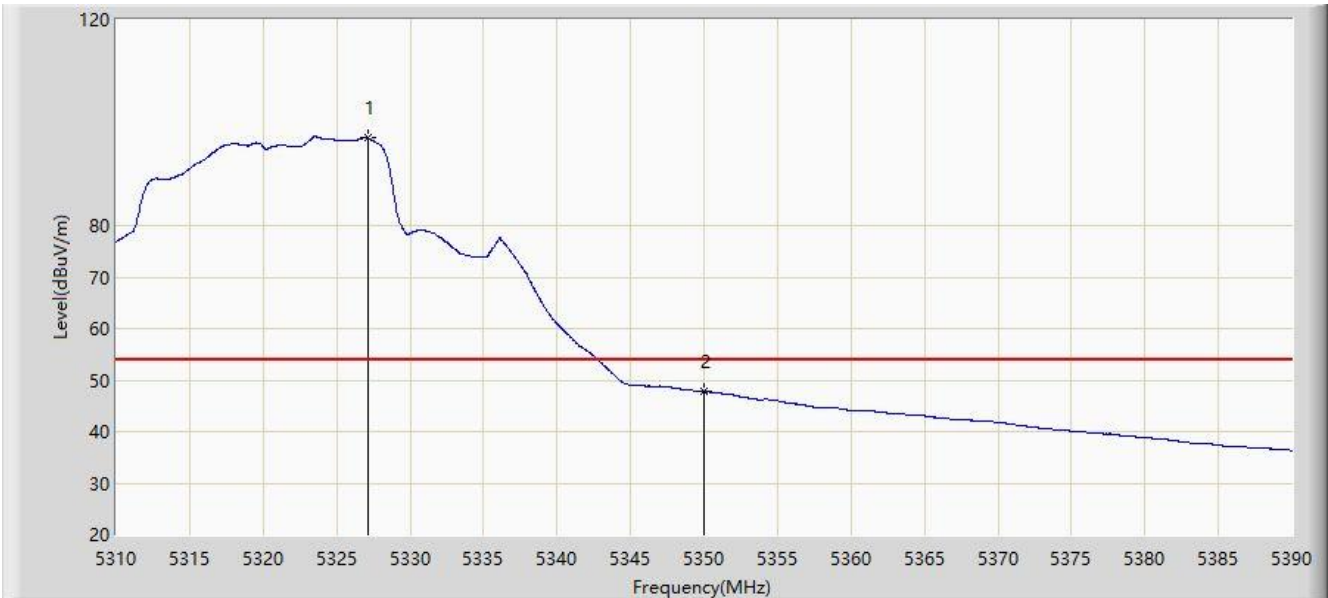


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		*	5326.920	105.569	64.803	N/A	N/A	40.765	PK
2			5350.000	60.586	61.968	-13.414	74.000	-1.382	PK
3			5352.920	64.835	67.563	-9.165	74.000	-2.729	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 22:31
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Horizontal
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5320MHz by 802.11a	

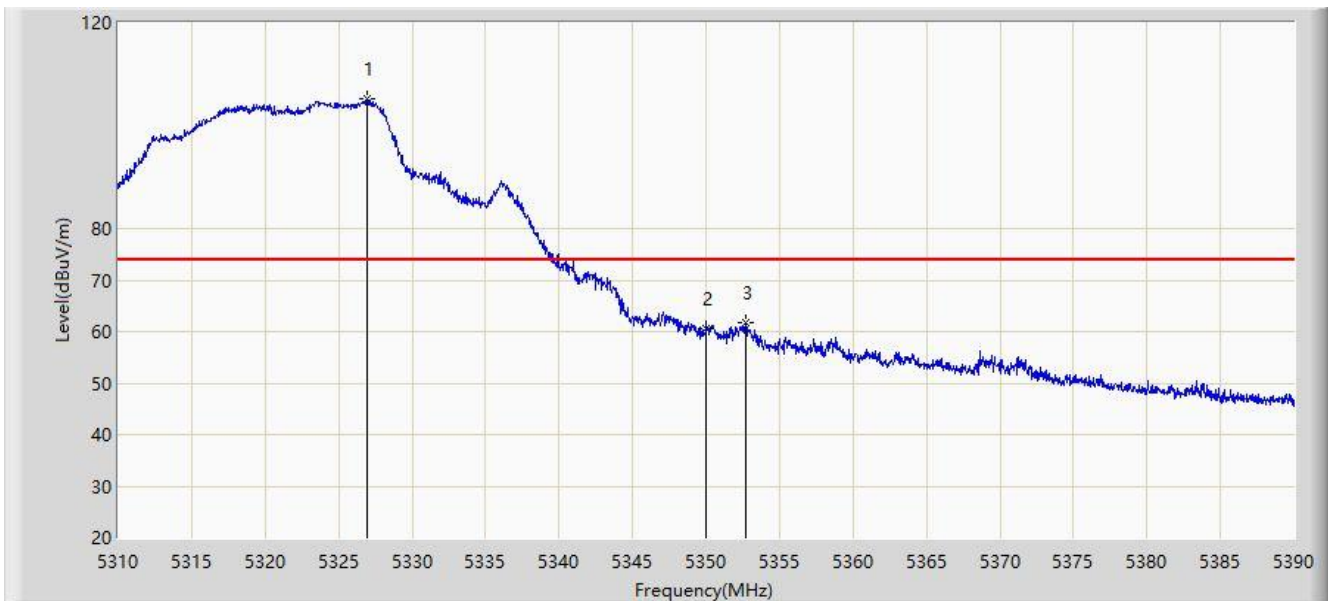


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		*	5327.120	97.001	55.954	N/A	N/A	41.047	AV
2			5350.000	47.708	49.090	-6.292	54.000	-1.382	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 22:23
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Vertical
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5320MHz by 802.11a	

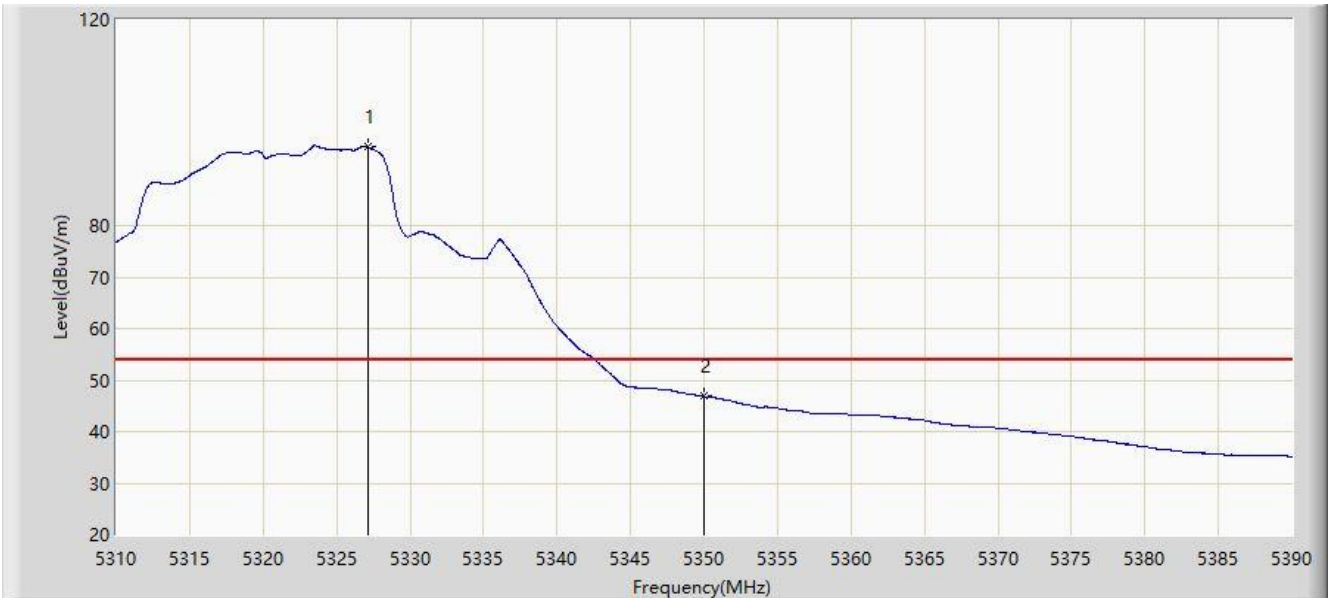


No	Flag	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1		*	5326.920	105.094	64.328	N/A	N/A	40.765	PK
2			5350.000	60.642	62.024	-13.358	74.000	-1.382	PK
3			5352.680	61.704	64.377	-12.296	74.000	-2.673	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 22:27
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Vertical
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5320MHz by 802.11a	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		*	5327.120	95.335	54.288	N/A	N/A	41.047	AV
2			5350.000	46.818	48.200	-7.182	54.000	-1.382	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 23:04
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Horizontal
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5500MHz by 802.11a	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			5458.395	58.936	62.632	-15.064	74.000	-3.695	PK
2			5460.000	57.777	61.615	-16.223	74.000	-3.838	PK
3			5468.700	67.633	69.930	-0.567	68.200	-2.296	PK
4			5470.000	65.709	67.471	-2.491	68.200	-1.762	PK
5		*	5495.925	102.694	64.143	N/A	N/A	38.550	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 23:07
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Horizontal
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5500MHz by 802.11a	



No	Flag	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1			5460.000	43.200	47.038	-10.800	54.000	-3.838	AV
2		*	5496.240	93.759	55.558	N/A	N/A	38.200	AV

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 23:08
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Vertical
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5500MHz by 802.11a	

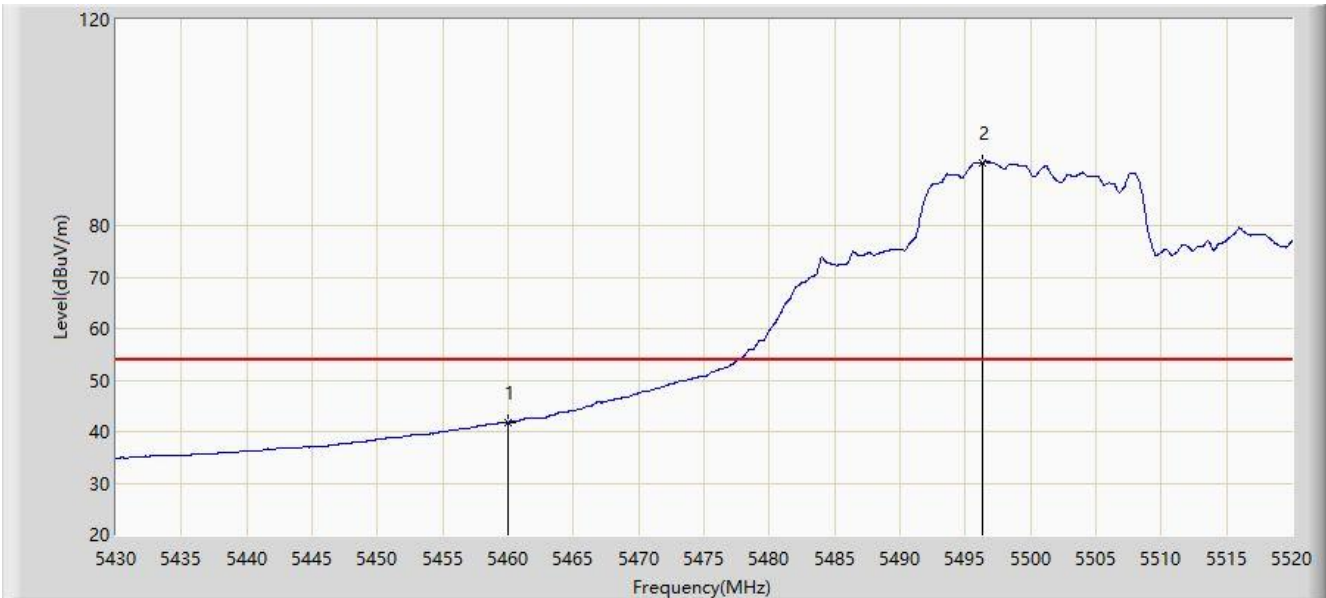


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			5458.665	56.434	60.216	-17.566	74.000	-3.782	PK
2			5460.000	56.207	60.045	-17.793	74.000	-3.838	PK
3			5470.000	64.697	66.459	-3.503	68.200	-1.762	PK
4		*	5495.610	102.749	63.819	N/A	N/A	38.930	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 23:13
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Vertical
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5500MHz by 802.11a	

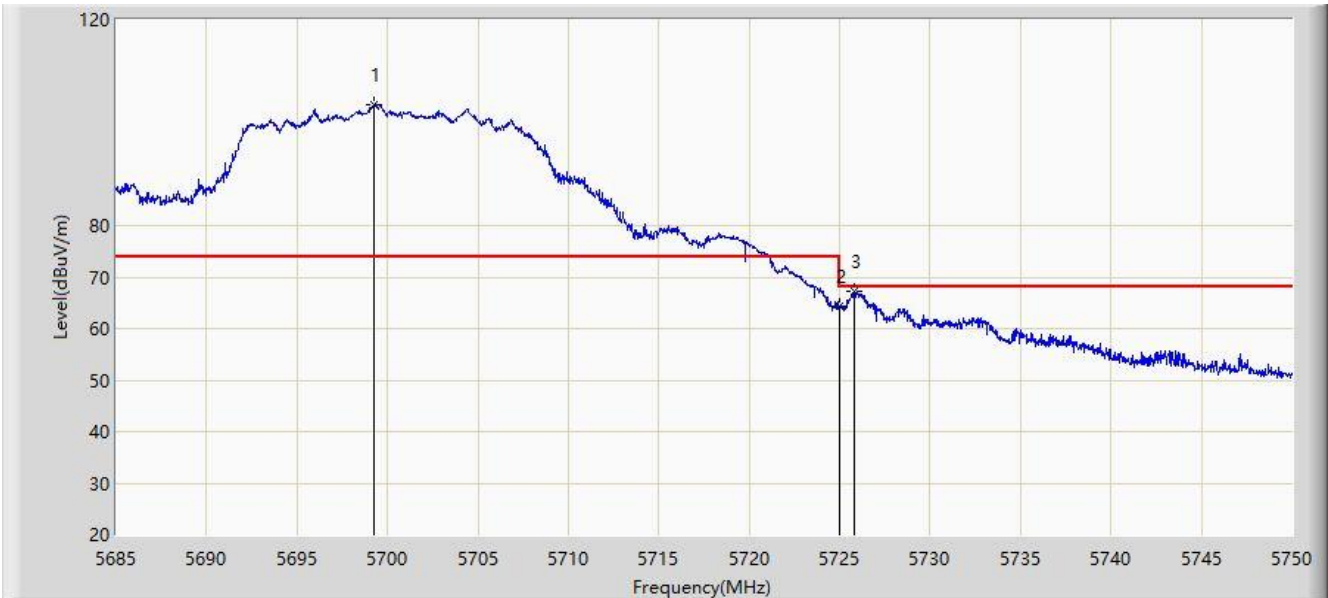


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			5460.000	41.801	45.639	-12.199	54.000	-3.838	AV
2		*	5496.285	92.215	54.063	N/A	N/A	38.151	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 23:20
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Horizontal
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5700MHz by 802.11a	

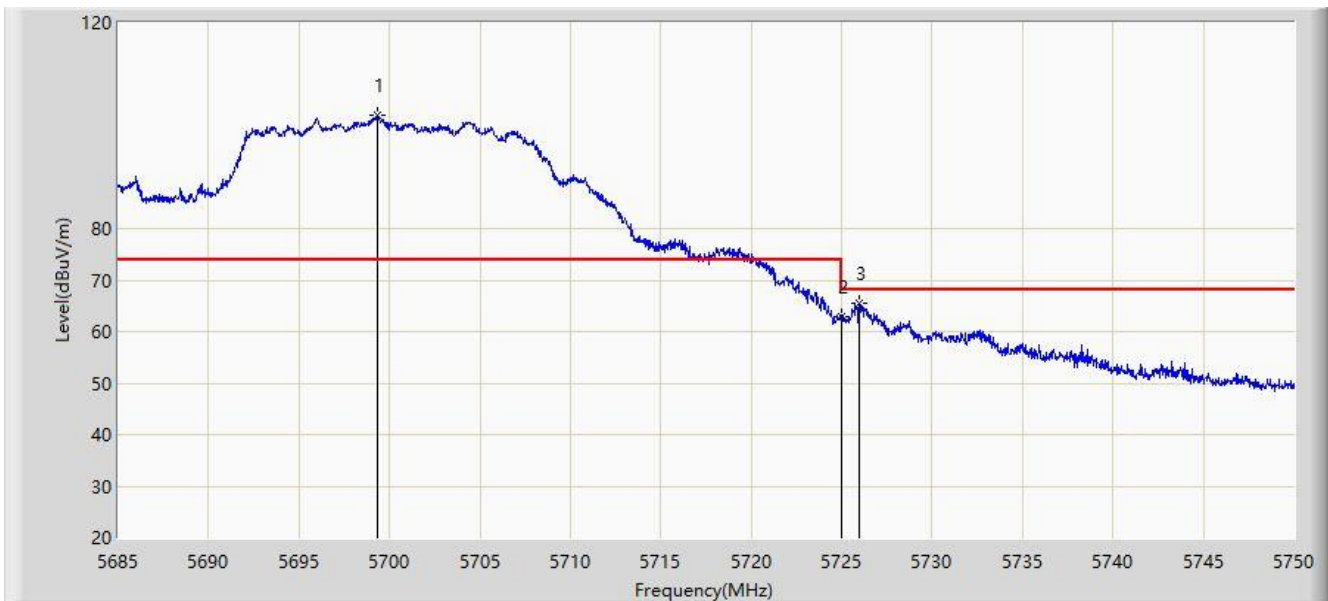


No	Flag	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1		*	5699.268	103.399	66.719	N/A	N/A	36.679	PK
2			5725.000	64.305	64.272	-3.895	68.200	0.032	PK
3			5725.788	67.368	67.763	-0.832	68.200	-0.394	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/10 - 23:23
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Vertical
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5700MHz by 802.11a	

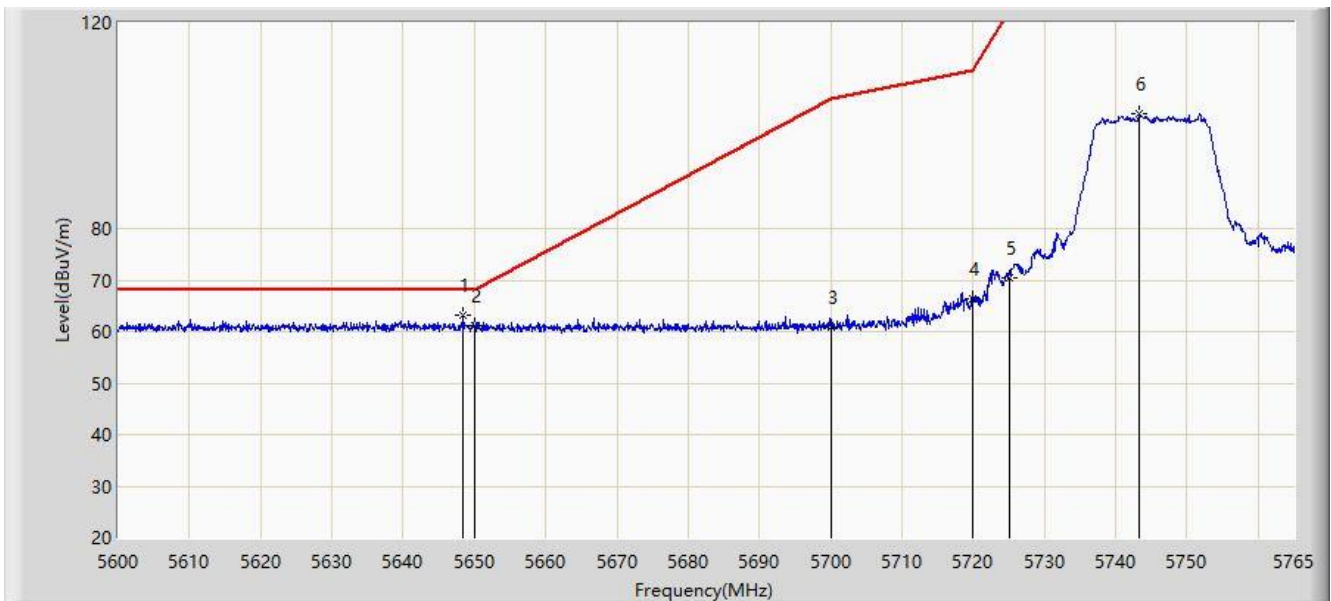


No	Flag	Mark	Frequency (MHz)	Measure Level (dB μ V/m)	Reading Level (dB μ V)	Margin (dB)	Limit (dB μ V/m)	Factor (dB/m)	Type
1		*	5699.365	101.924	65.188	N/A	N/A	36.736	PK
2			5725.000	63.008	62.975	-5.192	68.200	0.032	PK
3			5725.982	65.517	66.116	-2.683	68.200	-0.599	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/11 - 00:29
Limit: FCC_Part15.407_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Horizontal
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5745MHz by 802.11a	

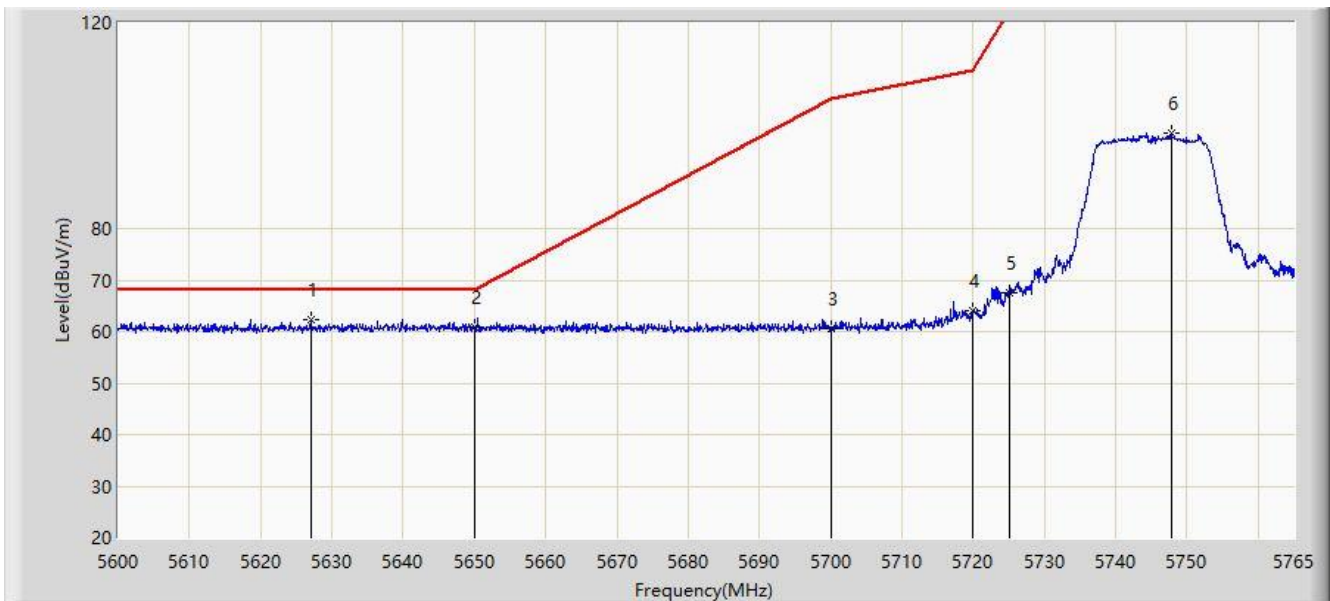


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		*	5648.428	63.295	72.114	-4.905	68.200	-8.819	PK
2			5650.000	61.142	69.971	-7.058	68.200	-8.829	PK
3			5700.000	60.767	69.630	-44.433	105.200	-8.863	PK
4			5720.000	66.404	75.211	-44.396	110.800	-8.807	PK
5			5725.000	70.394	79.165	-51.806	122.200	-8.771	PK
6			5743.303	102.220	111.176	N/A	N/A	-8.957	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/11 - 00:40
Limit: FCC_Part15.407_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Vertical
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5745MHz by 802.11a	

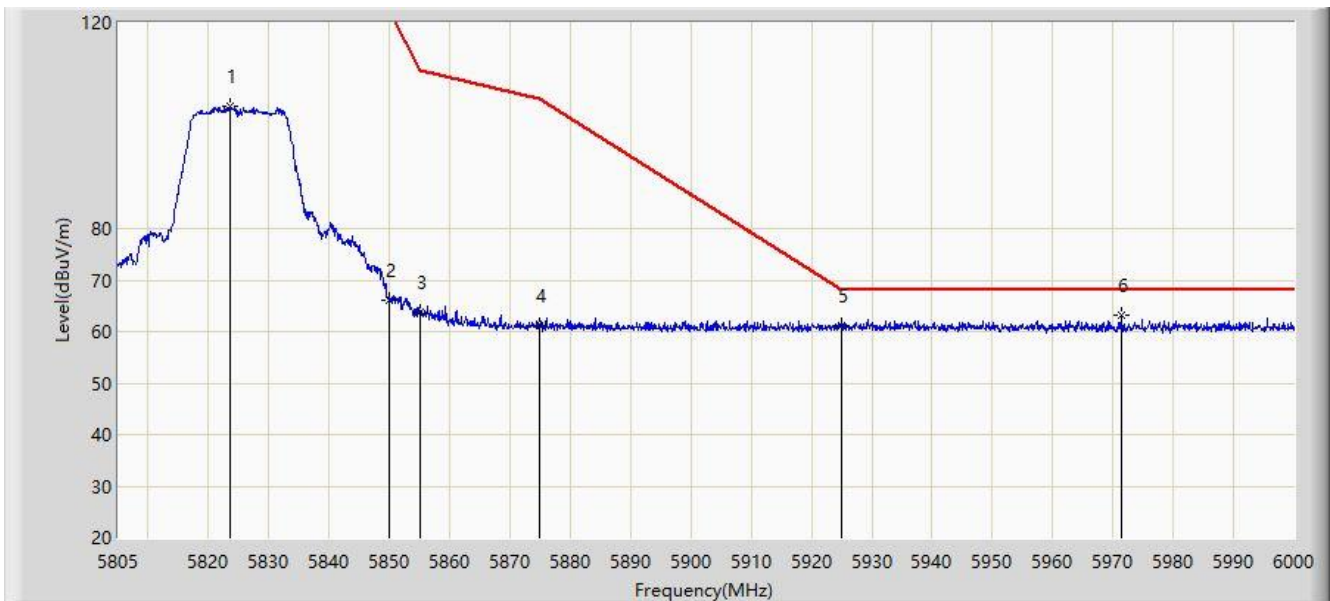


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		*	5627.060	62.403	71.249	-5.797	68.200	-8.847	PK
2			5650.000	60.822	69.651	-7.378	68.200	-8.829	PK
3			5700.000	60.615	69.478	-44.585	105.200	-8.863	PK
4			5720.000	64.023	72.830	-46.777	110.800	-8.807	PK
5			5725.000	67.502	76.273	-54.698	122.200	-8.771	PK
6			5747.840	98.425	107.353	N/A	N/A	-8.928	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/11 - 00:46
Limit: FCC_Part15.407_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Horizontal
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5825MHz by 802.11a	

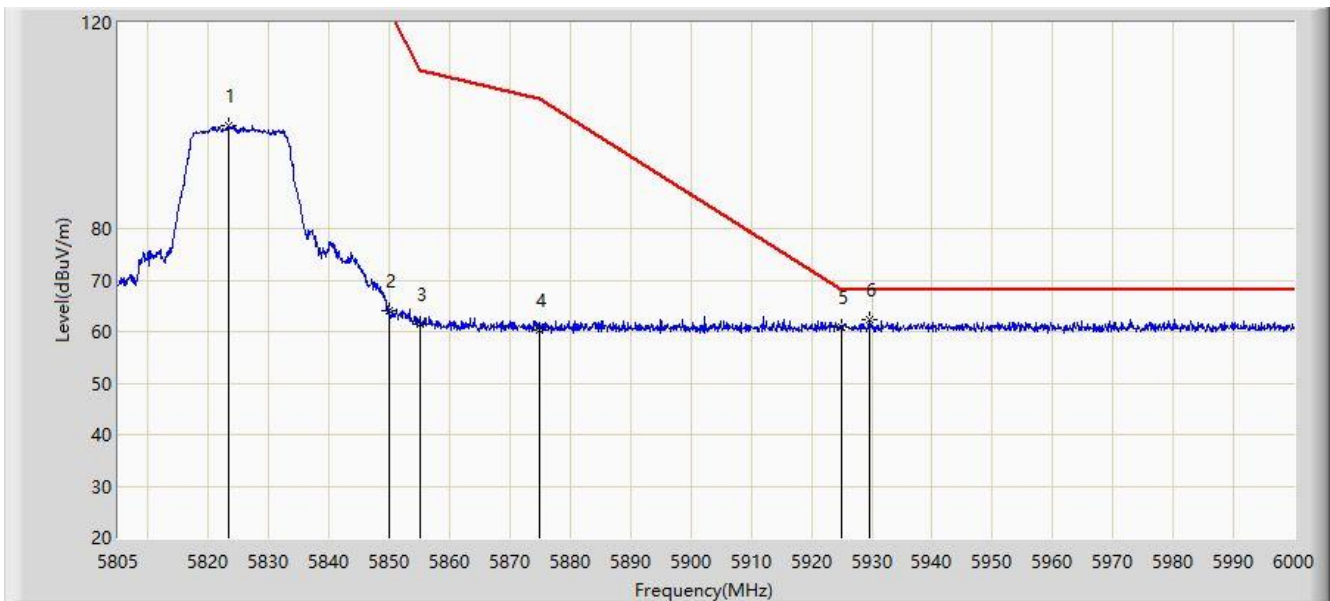


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			5823.525	103.863	112.551	N/A	N/A	-8.687	PK
2			5850.000	66.079	74.764	-56.121	122.200	-8.685	PK
3			5855.000	63.889	72.575	-46.911	110.800	-8.686	PK
4			5875.000	61.190	69.819	-44.010	105.200	-8.630	PK
5			5925.000	61.258	69.839	-6.942	68.200	-8.581	PK
6		*	5971.335	63.182	71.832	-5.018	68.200	-8.650	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/11 - 00:51
Limit: FCC_Part15.407_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Vertical
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5825MHz by 802.11a	

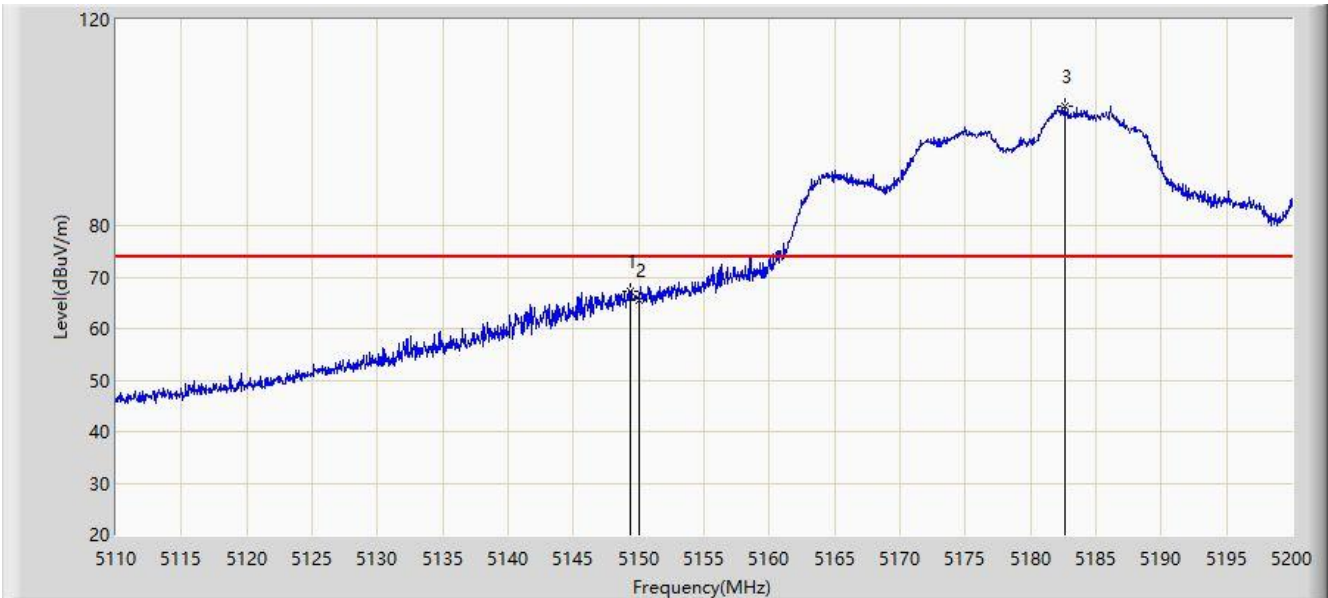


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			5823.232	100.001	108.689	N/A	N/A	-8.688	PK
2			5850.000	63.938	72.623	-58.262	122.200	-8.685	PK
3			5855.000	61.575	70.261	-49.225	110.800	-8.686	PK
4			5875.000	60.353	68.982	-44.847	105.200	-8.630	PK
5			5925.000	60.767	69.348	-7.433	68.200	-8.581	PK
6		*	5929.703	62.294	70.854	-5.906	68.200	-8.559	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: SIP-AC3	Time: 2022/03/11 - 10:50
Limit: FCC_Part15_Band Edge(3m)	Engineer: Allen Zou
Probe: SIP-AC3_HF907_102861_1-18GHz	Polarity: Horizontal
EUT: AltumView Sentinare 2 Smart Activity Sensor	Power: AC 120V/60Hz
Test mode: Transmit at 5180MHz by 802.11n-HT20	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			5149.375	67.144	69.798	-6.856	74.000	-2.654	PK
2			5150.000	65.612	68.073	-8.388	74.000	-2.462	PK
3		*	5182.585	103.078	65.747	N/A	N/A	37.331	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)